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ABSTRACT

The manual is intended to help educators of hearing impaired students interested in infusing career education into the existing curriculum. An introductory section explains the Comprehensive Career Education Matrix (CCEM), a model whose eight elements (self-awareness, educational awareness, career awareness, economic awareness, decisionmaking, beginning competency, employability skills, and attitudes and appreciations) provide a base for developing career education objectives. Three steps in implementing the model are then addressed: (1) establishing a goal statement, (2) establishing a learning activity, and (3) self-evaluation of teaching. Appendixes include sample evaluation instruments, infusion checklists, and infusion examples. (CL)

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I N F U S I O N

National Project on Career Education

Handbook on Career Education Infusion

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National Project on Career Education

Preface

PREFACE

Career Education began as an educational reform movement (Hansen, 1977). Hoyt (1977) has supported the view that career education should not be packaged as separate content but infused into the content of the existing curriculum. *Infusion*, defined as the weaving of concepts from a different discipline into the regularly taught curriculum (Raymond, 1980), demands a concurrent curriculum reform. However, thanks to the nature of the infusion process, changes in curriculum documentation and instructional strategies can be effected within the existing system with a minimum of disruption.

What support exists for the basic premise that the infusion approach to career education is preferable to alternative approaches? There may be strong evidence in a school system which would initially favor implementation of an alternative approach. Examination of the advantages and disadvantages of these alternatives may help justify program decisions. Clark (1979) has analyzed the arguments supporting three major alternatives for delivering career education: infusion, separate programming (add-on), and a combination of both.

Clark states some of the possible advantages of *infusing* a comprehensive career education model for the handicapped into a traditional curriculum:

1. Infusion makes abstract academic content more concrete, more relevant, and consequently, easier to learn.
2. Infusion increases the possibility for exposure to a wider range of career education concepts and skills.
3. Infusion assumes that everyone in the educational process will be participating from his or her own perspective, providing a broad-based support system.
4. If infusion is operative in the entire educational program, there is some assurance that the content of the curricula in regular classes will be more appropriate for many handicapped children. (p. 160)

According to Clark, the most significant disadvantage of infusion is its dependence upon the willingness and ability of teachers to incorporate the concepts and skills of a comprehensive model into each of the basic academic skill areas. Although its implementation can be required and monitored by the school district or principal and encouraged by giving support through inservice training, materials, release time, etc., the ultimate success of the process requires voluntary commitment on the part of individual teachers.

Delivering career education through *separate programming* as an add-on may be appropriate in a total vocational and/or technical school curriculum where career education is the major focus and all academic skills are taught as needed. Some institutions offer career education as a separate subject matter course. In other programs, every teacher may be expected to develop discrete objectives for content which will be taught during specific time set aside from regular academic instruction. The following advantages of an *add-on* approach are cited by Clark:

1. Separate programming assures that concentrated attention will be given at some time during the year to the goals and objectives for career education at a given level.
2. Separate programming communicates to pupils the importance of career development.
3. Separate programming may make more of an impact and lead to more effective and efficient learning through focused learning.
4. Separate programming offers students an opportunity to "tie together" the various career development concepts and skills they have been exposed to over a period of time.
5. Separate programming can serve as a motivating technique for upcoming basic subject matter content and experience.
6. Separate programming provides a specific opportunity to (use) the expertise of the elementary school counselor — as a resource person, a team teacher of a unit, or a consultant to individual pupils.
7. Separate programming may facilitate the undertaking of special activities and the extensive use of community resources. (pp. 161-162)

The significant disadvantages of add-on include a glutting of curriculum with new content, a need for a special teacher (when current staff does not have the required skills), and a need for a specialized curriculum with a well developed, sequential curriculum guide and achievement assessment instruments. As a result of the increase in resource requirements, separate programming raises the cost of instruction.

A *combination* of delivery options would probably best meet the needs of most administrators, teachers, and students. Clark lists the following advantages of a combination approach:

1. A combination of infusion and some separate programming permits a balance between teaching critical academic skills (with career education content incorporated for application) and critical career education concepts and skills (with *basic* skills incorporated as problem-solving tools).
2. A combination approach avoids, to some extent, the issue of adding to an overcrowded curriculum and poses less of a threat to subject matter specialists.
3. Combining the two approaches permits the teacher to be involved in the total education process by retaining responsibility for covering all critical areas, but without having to personally take on certain instructional goals.
4. Infusion and separate programming combined provide a unique opportunity to tie together concepts and skills learned in both academic and career education instruction.
5. A combination of infusion and separate programming provides the handicapped pupil in the regular classroom with the critical elements necessary for a "responsive environment," rather than a restrictive environment. (pp. 163-164)

The major disadvantage of a combination approach is the problem of coordination of classroom infusion with separate units and courses. Each teacher's use of the many effective instructional activities must be monitored.

The advantages of infusing career education concepts are clear, whether this occurs in a totally infused program or a combination program. The philosophical and theoretical bases for choosing this approach are strong, but little practical information is available to guide the individual teacher who is attempting to apply the theory. This handbook was designed to enable teachers to (a) identify career education concepts and objectives to be infused, (b) create strategies for infusing them, and (c) evaluate the success of their development efforts.

To be successful, the infusion process must begin at the conceptual level (Thompson, 1980). Whatever their source, concepts to be infused must be clearly identified and defined. They should be chosen for their compatibility with concepts already being taught, or the new educational activities will never be fully integrated into the curriculum.

After the concepts have been identified specific instructional strategies can be developed. It is important to remember that original content which has already withstood the challenges of repeated classroom application is the strongest foundation on which to build a career education program. There are many areas of the curriculum which the teacher should examine in his/her search for the content needed to develop infusion strategies. The teacher might select units of content that:

1. overlap or coincide with the career education concepts to be taught.
2. have been found satisfying or successful by the teachers and/or students, and thus will be approached enthusiastically.
3. have *not* worked successfully, but contain information which must be covered.
4. lend themselves to active student participation in problem solving and decision making.
5. involve community people and resources.

In reality, any unit could be improved through infusion of career education concepts. The content areas that have some of the characteristics listed above may simply be the easiest places to begin the curriculum development process.

Evaluation of every stage of the process is a vital aspect of infusion. Raymond (1980) has suggested three points to consider when reviewing the adequacy of an infused career education program. They are (a) comprehensiveness of coverage of career development concepts, (b) appropriateness of student objectives for each grade level in the context of recent career development research and its implications, and (c) thoroughness of program design and description. Raymond used these criteria to review 73 middle-school career education programs for hearing students and found them lacking, especially in comprehensiveness of coverage. In most programs, there was a disproportionately heavy emphasis on occupational information. The programs did not focus on students' abilities and developmental levels, and program descriptions lacked specific objectives, making it nearly impossible to evaluate student outcomes and program effectiveness.

Raymond's research findings imply a need which the contributors to this handbook hope to help satisfy. Educators of the hearing impaired who are teaching without a written academic program can use the handbook as a guide to creating a syllabus of infused lesson plans. In addition, existing curricula can be improved by using the process outlined in this handbook. The emphasis is on documentation which will make it possible to evaluate, revise, and replicate the efforts involved in providing successful career development programs for deaf students.

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Acknowledgements

Development of this handbook was inspired by reports from participants who attended the 1979 and 1980 NPCE Regional Workshops. They reported that the intensive training modules covering infusion, while serving as an excellent introduction and motivation for infusing career education, did not result in adequate skills for them to return to their schools and confidently teach other faculty how to infuse career education. We are appreciative of the evaluative feedback which helped guide our development efforts.

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Goal and Strategy for Handbook on Career Education Infusion

Audience:	All educators of hearing-impaired students interested in infusing career education
Behavior:	Will apply the infusion process to their curriculum strategies
Conditions:	After working through this handbook
Degree:	By correctly generating infused classroom activities 100% of the time.
Goal:	Given adequate time and opportunity to read and process the information and practice the steps given in this handbook, each reader will be able to distinguish between classroom activities that have infused the Comprehensive Career Education Matrix (CCEM) into their academic content area and those that have not. Further, each reader will learn to develop infused career education activities in each content area s/he teaches.
Strategy:	The reader will be (a) reminded of the process for infusion of career education into existing academic curricula learned in the NPCE workshop, "Career Education and Planning Skills," and (b) introduced to information that will clarify *why* there is a need for this handbook on infusion. This handbook will show *what* infusion means and *how* it can be used to implement career education into any classroom activity. Readers will also successfully write an ABCD (Audience, Behavior, Condition, and Degree) type of objective in their content area and be able to select a strategy for infusing the elements of the CCEM into lesson plans for teaching that content.

National Project on Career Education

Introduction

Introduction

Most educators have supported the concept of career education (CE). The U.S. Director of Career Education, Kenneth Hoyt (1977), states that career education holds great promise as being an agent in changing attitudes and experiences in our classrooms by providing a new approach to the education of our young. Some confusion and uncertainty have been evident with the new approach. Most advocates of career education believe infusion to be the most successful method of teaching career education concepts to the student. Before we explore the infusion process, we need to consider several questions: What are we infusing? What is career education? Are the goals of career education any different for a hearing impaired student? Galloway (1976) writes, "While definitions vary greatly, and program procedures show some differences, the ultimate goal is virtually the same (as for a nonhandicapped student)--that of a satisfactory and rewarding life role." Hoyt (1976) also believes that career education is a planned program which can help students become fully productive members of their community. Career development involves daily experiences. Career education requires a plan to insure that such experiences provide a context for meaningful career development.

The skill of developing career education objectives in coordination with academic objectives is often difficult for teachers at first. A deficiency in the skill of writing objectives may be part of the problem. Linking the elements of career education to existing course objectives has been accomplished in a variety of imaginative ways. As with any skill-building effort, "practice makes perfect." Achievement will be aided by the exposures and practice provided in this handbook. Guidelines for self-evaluation of the infusion effort are also included.

CCEM

The Comprehensive Career Education Matrix (CCEM) is a career education model advocated by the U.S. Office of Education (Hoyt, 1976) and is the referent model used by the National Project on Career Education (Egelston-Dodd, 1980). The eight elements in this model (see Figure 1) provide a base for developing career education objectives. Specification of objectives for each of these areas will vary from program to program. This variation often is a semantic difference and should not cause undue concern to programs searching for the "true" set of objectives for comprehensive CE program planning. The sample career education objectives presented in Appendix A were developed by the staff at Phoenix Day School for the Deaf (1980). The objectives trace the student's learning and maturation, from awareness through specialization, in each of the elements. Each stage has been divided into grade levels for convenient reference.

The environmental dimension of the CCEM emphasizes the collaborative nature of the planning, delivery, and support efforts that are essential for a comprehensive program. By approaching representatives of the community and home environments and inviting their contribution to the planning process, the chances of successful implementation are greatly enhanced.

CAREER DEVELOPMENT MODEL

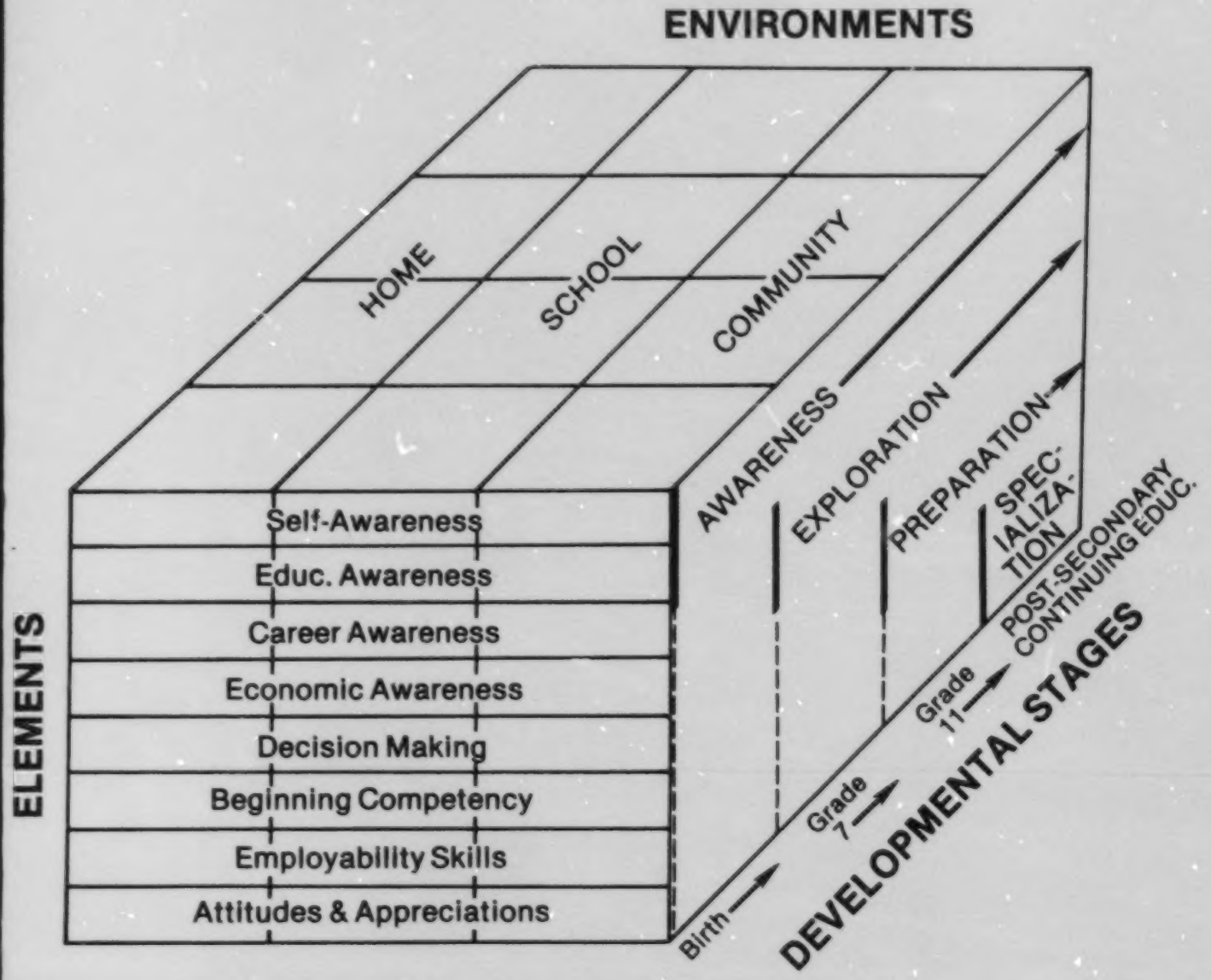

Figure 1 - CCEM

Infusion - A Description

In the process of seeking the best method to implement career education in the classroom, infusion has been suggested as the most appropriate delivery system for the skills needed. Infusion is the "mixing in" that gives new life, flavor, or significance to something else, like sugar in coffee. Infusion also means to enliven, inspire, animate, or exhilarate. Infusion is a process of weaving career education concepts into subjects like math, language arts, science, or social studies. It can make teaching more effective by increasing the relevance of existing academic content. In reality, it is a new name for the old practice of applying normal classroom skills to the world of work. However, many advocates of the infusion approach may, in practice, be teaching the content of career education as separate units or lessons. This is not infusion, but an add-on approach. The benefits of infusion are reviewed in the preface of this Handbook.

Attitudes

Attitudes influence not only what we do, but how we do it. This is easy to observe in the classroom. Dr. Harry Lang (Note 1) writes that he works with attitudes all the time in the physics classroom. He works with attitudes about deafness; attitudes about socializing and communicating with people; attitudes about jobs, punctuality, conscientiousness, care for equipment, and accuracy of measuring. He tries to set an example for students. But more importantly, he tries to help them realize that these work attitudes are as important to them as the physics formulas and theories they are learning.

As educators of the deaf, we must work not only with the attitudes of

our students, but also with those of colleagues, parents, and society in general. Lang (Note 1) describes some of these attitudes in his paper "Sense and Nonsense in Career Education." He writes:

1. It is nonsense to see deaf students go through twelve grades without being exposed to successful deaf adults. Deaf role models should be invited into the math class, the English class, the science class, and so on. This is an excellent way to motivate students, increase awareness of potential careers, and develop self esteem. A deaf friend of mine, also a physicist, traveled across the country and talked with over 3500 students, parents, and teachers. I have boxes of letters from deaf kids in my office. Some are very touching. Many children never met a deaf adult and were surprised that deaf adults could be successful. Bob loaned me his letters. I didn't want to give them back. There is no better evidence for making my case for infusing career education by using deaf role models.

2. It is nonsense to think that deaf students will best learn about careers when they get to college. Work habits and attitudes are developed as the child learns in the school and home. The academic program teachers can mean the difference. An understanding of careers should be developed throughout the K-12 grades.

3. It is nonsense to believe that a special class for career decision making or career planning skills will be a panacea. Much research has shown that infusion of career education into the academic content classes is more effective and motivates the student to learn the subject. Research has also shown that a fair number of deaf students (even in college) are not at a level of development where they intrinsically value learning about and using career planning skills.

4. The myths and stereotypes about deafness are nonsense. On the contrary:

   Deaf people <u>can</u> have jobs requiring a high degree of communication. One of my students from my 1970 class is now a lawyer. Another from my 1974 class is an insurance sales representative. Deaf graduates of NTID, Gallaudet, and other post secondary institutions are psychologists, engineers, and M.D.'s. They have found ways to get over, under, and around the communication barrier.

   U.S. Department of Labor surveys show that handicapped workers have <u>fewer</u> disabling injuries than non-handicapped workers exposed to the same work hazard.

   Studies by firms such as Dupont show that handicapped workers actually tend to be absent <u>less</u> than non-handicapped workers.

Performance studies by the U.S. Government as well as companies like Bulova Watch Corporation, Sears and Roebuck, Hughes Aircraft, and many other organizations reflect that handicapped workers, when properly placed, do work that is equal in both quantity and quality to that of their non-handicapped co-workers.

5. Another myth is that held by teachers--that the academic classroom is not a place to help dispel these myths. That is not true. The teacher must intervene when such stereotypes are also believed by the deaf students themselves. This is career education. (pp. 9-11)

As we begin development of greater skill with infusion, we need to be aware of our own attitudes. Let's look at an example of what an attitude change can do to improve the idea of teaching. Each of the following conversations reflects an attitude toward career education and infusion. The teachers' conversation below was heard in the hall outside of the teachers' lounge.

New Teacher (NT): What do you teach?

Old Teacher (OT): Fourth grade.

NT: What do you do to teach career education?

OT: I set aside a time every week when the kids and I talk about jobs and go to factories and stores to visit. We make things in the classroom that are related to the jobs we talk about and see.

NT: Oh...is this what they call infusion?

OT: I don't understand that infusion stuff. I'm busy enough trying to teach career education with everything else. I don't have enough time to work anything else in.

All too often, this is where the conversation ends. Conversations like this occur throughout schools around the country. Teachers are often not aware of how words and actions can influence others. In the example above, the impression left on the new teacher was not a positive feeling about career

education and infusion. Imagine how different this could be if there was a change in attitude toward career education. Let's look at a similar conversation between two teachers who are on a different awareness level.

NT: What do you teach?

OT: Fourth-grade children.

NT: What do you do to involve your students in career education?

OT: I help them become more aware of the world around them.

NT: I hear that you cover all kinds of careers in your classroom.

OT: I'm sure that is what many people believe happens in our classroom. It is really much more than that, however. In reading, math, social studies, and science, the students not only become involved with the content area, but with each other. This interaction helps them develop an awareness of self and an appreciation for the needs of those around them. They learn the skills and requirements that are required in the career areas we cover in class. We...

NT: When do you have time to teach math and science or...

OT: Okay, I'm glad that you asked... In math, we learn how times tables are used in our finances at home, in different kinds of work. We learn how to make decisions based on everyday experiences. Try and put students' interests into each daily lesson.

Contrast these two conversations. The first is an example of how career education is viewed as a separate course. It consists of information about jobs and is not taught in conjunction with the course content. The second example shows a teacher who believes that career education is what students learn through a totality of experience and exposure to their surroundings. The latter example also illustrates a teacher who believes infusion is the weaving of career education concepts into each content area.

The next time someone asks you what you teach or how you involve your students in career education, what will your answer be?

National Project on Career Education

Establishing a Goal Statement

Establishing a Goal Statement

As teachers, we document some form of required or voluntary plans and objectives for day-by-day teaching tasks. How thoroughly we do this may influence our preparedness and the success we have with our students. We all must answer some basic questions, either consciously or subconsciously, when we set out our plans. We must ask:

1. What am I going to do?
2. How am I going to do it?
3. What will I need to do it?
4. How will I know when I have done it?

When we go through some form of pre-instructional information gathering (questions, readings, past experience) to prepare for our daily activities, our plans, upon completion, become our "road map" for what will be occurring in our classrooms.

Let us look at an example of planning for a vacation or trip. Each of the steps in this plan has an important function in the establishment of the goal statement and the success of the total plan.

Our Trip

Imagine, for a moment, that we are planning to take a trip (WHAT) with our family (WHO). We need to establish WHERE we want to go and the PURPOSE for that selection. We should know HOW FAR away the place is and HOW LONG we have to complete the trip. In addition, we would want to know the BEST WAY to travel, WHO and WHAT to see along the way, the ACCOMMODATIONS needed, and the COST to take the trip. The last step of the plan would be to record the experience and compare it with other trips we've taken previously (EVALUATION).

There is a direct relationship between asking these questions and the process we experience every day in planning for our "trip" for each content area in our classrooms. Let's consider the trip example and note the parallel of the "road map" and our daily classroom activities.

STEP	QUESTION	TRIP ITEM	CLASSROOM ITEM
1.	WHAT are we going to do? WHO is going to go?	Take a trip All of family	Work on math skills Third grade
2.	PURPOSE for going?	See new granddaughter or niece	District/school goals
3.	WHERE are we going? HOW FAR are we going? HOW LONG will we be gone?	To Denver, Colorado 1,600 Miles 3 weeks	Multiplication skills Through X=10 Until 90% all X's
4.	What is the BEST WAY to go?	Car on Interstate 70	Choice of one or more teaching strategies
5.	WHO/WHAT will we see on the way?	Plains, wheat, campgrounds, forts, mint	CE concepts
6.	What are the needed ACCOMODATIONS?	Tent, camping equipment, cameras, film	Guest speaker, films, books, handouts
7.	How much will the trip COST?	$850 for gas, food $25 for film, fees	Support personnel, lunch for speaker, library budget for books and films
8.	How can we EVALUATE this trip?	Take movies, keep a log, collect souvenirs	Record data of what went well, what failed, evaluate daily, ask "How can I teach it better next time?"

From this breakdown of information, we can understand how a goal statement for the trip can be made:

Given three weeks vacation, the whole family will go to Denver to see the new granddaughter and niece. Events along the way will be planned for all the members to enjoy. Both movies and still pictures will be taken and souvenirs purchased to help preserve the memory of the trip. A daily log will also be kept as a record of the activities of the family while on the trip. This log and pictures will be shared with the family and friends after the travelers return home.

When we are formulating goal statements, our overall purpose is to identify what the learner is to do, how well the student is to perform the task, and under what conditions this will take place (Banathy, 1968). As we look back at the sample on page 14 on planning a trip to Denver, we can see that once the goal or objective was established, the rest of the steps were easily developed. This example has 8 steps to help clarify the objective-writing process. A classroom example was given for each step to show how it also related to our teaching. Each of you is familiar with steps 1 and 2, the IEP and District/School Goals, for your students. Steps 3-8 describe what needs to be done to accomplish steps 1-2.

Although the above goal gives the reader the basic idea of what will be taking place, there still are some questions that have not been answered. These questions help us choose the kind of strategy that we will use to accomplish the goal.

In the example of the trip, we have seen from the goal statement that the strategy which answers the question "What is the best way to go?" has not been clearly defined. When this information is added, it will aid in the goal's implementation. In order to arrive at a good response to this

question, however, we need to seek more information. The selection of a strategy is more than knowing the available choices and selecting one. Information on the needs of each of the family members is required. Because it was known from past experience that the family loves the outdoors and camping, and that they had not seen the plains area of Kansas, it was easy to incorporate (infuse) these experiences into the trip. Knowing that the family also enjoys early American history and politics made it easy to decide that a trip into the plains and towns of Kansas would be an excellent way to develop the trip around the interests of the family. This information helped decide the strategy (step 4, "What is the best way to go?") of driving the family car through Kansas on Interstate 70, rather than flying or taking a bus.

It was step 5 ("Who/What will we see and do along the way?") that provided the information necessary for step 4 ("What is the best way to go?"). It was then easy to decide what information or items were needed for step 6 ("What accommodations/supplies will be needed?") and step 7 ("How much will the trip cost?"). This same process of planning is necessary for success in planning meaningful and enjoyable lessons for our classrooms.

One of the best ways to improve each content area is to plan activities, skills, and the learning of new facts around the question "Who/What will we see and do along the way?" Career education content is a perfect place to look for answers to that question. When we weave this content into our math, science, language arts, or social studies content areas, we are infusing career education into our classroom.

National Project on Career Education

Establishing a Learning Activity

Establishing A Learning Activity

Before undertaking further skill development in the infusion process, the ability to develop instructional objectives must be mastered.

A review of the literature on writing objectives reveals that there are as many systems or ideas for writing them as there are writers. Mager's work (1962) on the planning and writing of objectives suggests that a person must ask the following three questions in order to produce a lesson plan:

1. What is it we must teach?
2. How will we know when we have taught it?
3. What materials and procedures will work to teach what we wish to teach?

Carey and Dick (1978) state that an accepted plan for objectives would have at least three major components:

1. What is it the students will be able to do?
2. What are the conditions under which this will take place?
3. What criteria will be used to measure their performance?

The ABCD Method

Kapner and Sparks (1972) wrote a programmed text on writing objectives with four basic components. These four components (known as the ABCD method) may be useful in the development of a plan for your classes. The four components are:

A = the Audience--those that are expected to perform.
B = the expected Behavior of the performer.
C = the Conditions of the performance.
D = the Degree of the performance.

You will recall that the goal for this Handbook was documented in this format.

A look at the various systems for writing goal statements indicates that each is focused on the same developmental idea, although some may have more steps than the others. It really doesn't matter if we call the system the ABCD method or give it three or more numbered steps. Each has an audience who will be performing a certain task (behavior) under certain conditions to accomplish that task with a desired level of accomplishment (degree). For clarification and a better understanding of the steps in the plan for the trip, let's compare them to the ABCD method of Kapner and Sparks.

Below is a chart that will help you compare each question represented on the trip and for the classroom.

COMPONENTS (QUESTION)	TRIP INFORMATION	CLASSROOM INFORMATION
Audience:		
Who is going on the trip?	Dad, Mom, Brother, Sister	Third graders
Behavior:		
What are you going to do?	See new granddaughter, niece, in Denver, CO	Times tables through X=10 (as stated in the Individualized Educational Plan or IEP)
Condition:		
What materials or situations must be present?	Given a map, money for resources, available gasoline	Given a relevant task which illustrates a future use of the new skill to be learned
Degree:		
How long will the trip be?	3 weeks	Until 90% mastery
How can we make it a fun experience for all?	Take movies, collect souvenirs, include everyone in plans	Keep data, evaluate daily, ask "How can I do it better?"

Infused Goals and Objectives

When we write our goal statements or objectives to answer the question "What am I going to do?", we should not limit our success by thinking we must limit our statement or objective to a short sentence. Kapner and Sparks give an example of this limitation:

Example one: Intern will remove an appendix.

Example two: During his/her training, each surgical intern on the general service mode will remove from a patient an inflamed appendix using the demonstration surgical equipment furnished. The intern will also make use of operating personnel available and will demonstrate mastery of accepted surgical incision, organ isolation, surgical McKinley technique of removal, antisipsis, and surgical closure under the direction of a resident physician. The patient will survive.

Looking at the two examples, we can readily understand why the second would be much more helpful in knowing what will be taking place. If our daily planning for each content area were designed with similar descriptive format, it would be easier to take steps to consider how career education could be infused into each lesson. It may be helpful in planning the goal statement to ask these questions: What do I want the student to know about this subject? Why is it important? How will the student use it (the information or new skill) in his/her life? (Egbert, Note 2).

Following are examples of how this type of planning (like the second example above) can be used to infuse career education concepts into the English and speech content area.

Example one: The student will write a theme on a subject of his/her choice.

This goal statement really does not tell much about what a student is to do. All of the questions we ask before planning and writing a goal statement are left unanswered. Example two (listed below) gives much more depth and direction for the teacher and the students. Let's consider the difference:

Example two: Given a list of selected community retirement centers near the high school, 12th-grade hearing impaired students from English and speech classes, working in groups of three, will select a center and conduct an interview with the director and three residents at a center. The data collected will cover how the center is operated, a description of life for the elderly at the center, the types of jobs available at the center, and the kind of training and education needed for each job. The students are also to invite the residents to come to the school and review the spelling, grammar, and writing skills used in the theme. Upon completing the visit, each student team will submit a three-page typewritten paper describing their findings from the visit. Each paper will be graded for correct grammar, spelling, and accuracy of the information provided by the student on a 100-point basis with 85% as passing.

This second goal statement expands the first goal for the teacher and the student. If we analyze this goal statement and put it into the ABCD format, each part is as follows:

Audience: ...each hearing impaired student in Senior English class (12th grade)...

Behavior: ...will interview the director and three residents of a center for the elderly and submit a paper on how the center is operated, what life at the center is really like, what type of jobs are available, and what education and training is needed for each.

Condition: ...the interviews will be done by students in groups of three.

Degree: ...three-page typewritten....85% for passing...

In example two above, the teacher has to take some steps to facilitate the success of the lesson. S/he needs to locate the community retirement centers ahead of time, make arrangements for the students to visit the campus, check with parents for field-trip permissions, etc.

Before the students leave on their field trip, the teacher and students cooperatively develop a checklist for the students to follow during the interview. By asking them what they wanted to learn (kinds of jobs, education and training needed, pay, etc.), there is continuity and control in what they are to do while away from the classroom. Each report thus should have the same focus. By discussing the checklist and developing it in the classroom with the students providing input, students will have more personal interest in what they are going to do and ask. The class discussion following the field trip will also have a central focus.

Before the teacher decides on the strategy to use for this lesson (to go away from the school setting on a working field trip), s/he has to know the answer to "Who/What do you want to see and do along the way?" In seeking this information, the teacher learns that the students have been reading about the elderly in their social problems class (a district/school goal). S/he also knows the students have been giving mock interviews in their speech class in order to recognize and develop qualities that are desirable in meeting the public when in interviewing situations. With this information, s/he chooses to combine these areas of study into the lesson. The students practice interviewing, meeting the public, and collecting data to write a paper for the English requirement.

The objectives for English and speech that help the teacher decide on

the strategy of interviewing the elderly at the community centers are (a) to write a theme, (b) to develop interviewing skills, and (c) to collect and report information. There is still another area which needs investigation to make the trip a relevant learning experience. The teacher considers the eight content areas of the Comprehensive Career Education Matrix. As s/he looks at these eight areas for high-school-age students (see Figure 1 in CCEM section of this Handbook, also Appendix A), s/he sees many possibilities for infusion.

Many of the subgoals from each of the CCEM areas could be interwoven into the field-trip experience the students are to have. Others could be covered after the students return to the class to discuss their experiences. As these CCEM concepts are infused into the English and speech lesson, the students will leave with a broader understanding of the elderly, plus they will be able to make some decisions about their own life-style when they get older or prepare for later retirement years.

Not all content lessons will be compatible with every element of the CCEM. However, for the sake of example, the CCEM concepts that could be infused into the lesson are:

1. Self-Awareness

   Through the interviews at the community retirement center, students learn through the visit and interview to communicate with the elderly and how they can be of service to them. This awareness will help students to accept themselves each as a unique person who can go out and meet the public and deal with them on various levels. This experience also helps students have a better understanding of the need for having a positive relationship between themselves and others to perform a task. It also provides insight into the aging process and helps students see their future status as an aged adult.

2. Educational Awareness

As a result of the interview, students are able to identify skills acquired in school that will help them in life and can understand how school classes and activities relate to their use of time throughout life. The students understand the level of education required to work in a particular role at the center--e.g., volunteer reads to aged person and needs to have oral reading skills; nurse gives shots and needs training.

3. Career Awareness

As a result of this experience, students learn the various job titles of personnel who work in a community retirement center.

4. Economic Awareness

As a result of this experience, students become aware that individual values determine individual needs and desired standards of living. Students will also understand factors which influence the cost of health care.

5. Decision Making

Students decide which patients to interview at the center. After working with this assignment, the students are able to predict and analyze the immediate, intermediate, and long-term effects their career decisions will have on themselves, their family, and society. The development of the checklist for the interview with all of the students involved in its development is also considered a decision-making process.

6. Beginning Competency

After this experience, students are able to collect data needed to solve problems. In addition to this, they demonstrate more interpersonal relations skills needed for a job working with people.

7. Employability Skills

After this experience, students will be able to participate in an interview.

8. Appreciation and Attitudes

As a result of this experience, the students understand the roles of leisure and achieving self-satisfaction. They also become aware of the community services and organizations available at the local, state, and national levels designed for the elderly and how these might also help elderly deaf people in the community.

We can see from the above example how each of the eight career education concepts of the Comprehensive Career Education Matrix could be covered by infusing it into an English and speech lesson. Many concepts will fall directly into place as a part of the field-trip strategy. Others will need to be covered by discussion before and/or after the experience. Each of these concepts helps enhance the lesson by giving it real-life relevancy. They are not separate courses to be taught, but are a part of the regular offering, being interwoven with the content area. This same idea can also be applied to other content areas, such as math, social studies, and science. The real key to infusion is in the planning that is done before the lesson is started.

The goal for the English class to write a theme on any topic (p. 21) would not have a high level of interest for most students. With the field-trip strategy (p. 22), the high activity level generates interest because students would be involved in the planning. Learning would be longer lasting with the achievement of the second goal than the first. Students would become more aware of the world around them and themselves as a result of this infused lesson.

In our daily planning, we can write each of our classroom objectives and strategies to reflect the infusion of the career education content. This will add relevancy to the subject material, thus helping students answer the question "Why is this important, and how will I use it in my life?"

Infusing Concepts for English/Speech (Example)

After the goal statement is written, including the audience, behavior,

condition, and degree for our lesson plan, the next step is to decide how we are going to meet that goal, i.e., the method or strategy. A teaching strategy is merely a carefully thought out method for creating the right learning environment for our students.

It may be necessary to change a strategy if resources are not available. An ideal strategy is one which best fits the audience and goal. Preplanning and selecting a strategy will allow the infusion of elements of the CCEM into nearly any class activity and will result in a plan that will be well received by students.

Carey and Dick (1978) believe that in planning and developing an instructional strategy, there are five major steps that must be considered before there can be a successful plan developed. These five steps can be briefly summarized as follows:

1. Pre-Instructional Activities

   The teacher needs to establish a pre-instructional atmosphere that will "hook" the students on the subject. This should be something that creates an environment that leads into the content theme.

   The teacher needs to ask if the students have the necessary skills to do what the teacher wants them to do and, if not, s/he must decide how to handle individual differences in prerequisite skills.

2. Presentation of Information

   The teacher needs to decide how to provide information and/or directions to this group of students to enable them to perform the criterion behavior at the end of the teaching episode. In traditional classes, students may read about or be lectured on the topic. For greater relevance (and thus greater motivation), it is recommended that the presentation strategy be connected with the world of work and/or the students' future use of the skill or information to be learned.

3. Student Participation

The teacher needs to provide the students with an opportunity for hands-on practice and feedback on the skills they are learning in the lesson with direct information regarding the future relevance of the skill.

4. Testing

The teacher needs to know if all the students can do the task to the degree that is asked of them. If not, the teacher needs to provide alternative skill-building activities so each student can practice successfully on their ability level until criterion is achieved.

5. Follow Through

The teacher needs to have related activities planned for further skill development for the students to move to after this lesson.

Using these five steps, let's look at the English and speech lesson above. The students have been reading about the elderly in their social problems class. In their English and speech classes, they have covered interviewing, reporting, and writing themes. The areas of spelling and grammar have been a focus all year. By combining a topic (the elderly) from another content area with the interviewing skills on which the students are working in speech and their writing skills in English, the teacher completes the Pre-Instructional Activities, component 1. For component 2, Presentation of Information, the teacher places students on teams of three, where their different abilities will balance each other--allowing each team to succeed in meeting their objective. Students also develop the general interview questions together in class, thus presenting each other with information and ideas they share.

In step 3, Student Participation, the teacher provides the opportunity for the students to practice their interview skills and, afterwards, their writing ability, in connection with their visit to the senior citizen center.

Testing, component 4, is met successfully by providing a checklist as a guide in the interview. Each student begins with the same format to start their questioning. Those who are more capable have the freedom to broaden each question and ask more probing questions to acquire information. Component 5, Follow Through, is met when the teacher asks for a final report which would demonstrate the students' writing and interviewing skills. The criteria for that report specifies items they have covered and learned earlier, i.e., grammar, spelling, theme organization, and writing skills.

Following are some examples and exercise sheets which may be helpful in learning how to plan goal statements following the ABCD method. Also included in the following material are suggestions on how to establish a strategy for infusion of the eight CCEM content areas. Examples of how this can be done in different subject/content areas are included in Appendices A, B, C, and D.

For a more in-depth study of writing goal statements and the ABCD method, follow the steps given in the learning activity packet (LAP), Writing Objectives: What You Always Have Wanted to Know About Behavioral Objectives but Were Afraid to Ask by Tom Kapner and Lanny Sparks (1972). For additional study in learning strategies, see Teaching Strategies by Donald Orlich, (1979), and Selecting Instructional Strategies and Media: A Place to Begin by David Merrill and Irwin Goodman (1972).

Writing Goal Statements: Practice*

For practice in learning how to apply the ABCD method of writing a plan, select a content area that you are very comfortable with, then write a goal statement for a particular lesson in that content area. Remember not to limit youself to one or two statements. Try to write enough so that you will be able to describe what you want to happen, who will be doing this, how they will be doing it, and how well you want them to do it.

A = the Audience who is to perform the task.	Who will be doing something? What is their entry level--can they do this task?
B = the Behavior you expect of them.	What will they be doing?
C = the Conditions under which the audience will perform.	Where will it be done? What resources will be needed to do this? How long will it take?
D = the Degree of measurement used to determine how well they did.	How well was it done? (10 out of 10, 80%, etc.) or what proportion of students reached the criterion level? (75% of the students will achieve 90% or above levels.)

* Adapted from Kapner and Sparks, 1972, p. 6.

GOAL:

During his/her training, each surgical intern on the general service mode will remove from a patient an inflamed appendix using the demonstration surgical equipment furnished. The intern will also make use of operating personnel available, and will demonstrate mastery of accepted surgical incision, organ isolation, surgical McKinley technique of removal, antisipsis, and surgical closure under the direction of a resident physician. The patient will survive.

Given the above goal statement, select the information that you believe meets the requirements of each of the five components of the ABCD method:

AUDIENCE: _____

BEHAVIOR: _____

_____

CONDITION: _____

_____

_____

_____

_____

DEGREE: _____

_____

After you have completed the task of putting the correct information into the five different categories, please turn the page and compare your selection of information with that of the author.

Following is the information that would be found in each of the five component areas with the information from the goal statement of the medical intern.

AUDIENCE:	...each surgical intern on the general service mode...
BEHAVIOR:	...will remove...an appendix....(Sub-behaviors include) surgical incision, organ isolation, surgical McKinley technique of removal, antisipsis, and surgical closure...
CONDITION:	During...training...from patient...inflamed...using demonstration surgical equipment...use operating personnel available...under the direction of resident physician.
DEGREE:	...demonstrate mastery....the patient will survive.

Repeat this exercise again with a content area of your own. Plan a goal statement for each class that you teach. This practice may be beneficial in helping you to plan and document your lessons in a systematic (ABCD) manner.

Write your content area here: _____

Now write your goal statement here: _____

_____

_____

_____

_____

_____

_____

_____

_____

Look at what you have written and see if you can put the information that you have into the four component areas of the ABCD method of writing a goal.

AUDIENCE: _____

_____

BEHAVIOR: _____

_____

CONDITION: _____

_____

_____

_____

_____

DEGREE: _____

_____

_____

Selecting a Strategy: Practice

One of the best ways to help us know what would be a good way to teach the lesson is to try to determine the answers to the questions "Who do we want to see along the way?" and "What do we want to do along the way?" The Comprehensive Career Education Matrix has provided us a place to start in answering these questions. In one or more of the eight areas, there is career education content that would enhance the content lesson. This career education topic, then, becomes a vehicle for achieving the lesson's goal.

Turn to Appendix C and look at the infusion checklist. Number 8 of the first area, self-awareness ("Respect the feelings of others"), would be a subgoal that would be appropriate for every student (K-12) to work through. This topic could be woven into almost any class. Numbers 9 and 31 are two others that would also fit into a lesson very easily: "Identify responsibilities..." and "Understand the need for positive..." Each topic can be infused (interwoven) into the regular content. Each of these topics will help you decide how to present the material and better answer the questions "Why is this important?" and "How will I use this information?" (Egbert, Note 2). In addition, it will help provide responses to "Why is it important to the student?" and "How will they use the information?"

Development Guidelines (Young, 1981)

1. Remember that you are infusing career education into the academic objectives and not vice versa.

2. Academic objectives seldom dictate only one infusable career education objective.

3. Often more than one career education objective can be infused into one academic activity. Because the definitional boundaries between the career education elements are an artifical segmenting of highly interrelated concepts, the infusion of two or more career education objectives within the same academic activity can be justified.

4. Modifying academic activities to better infuse career education is sometimes acceptable; however, modifying academic objectives is rarely needed and is probably inappropriate.

5. Infuse career education concepts in a systematic manner; develop and reinforce skills or knowledge through a series of infused activities. Avoid a hodge-podge approach in the name of comprehensiveness.

6. Avoid the trap of always naming job titles as a way of teaching career education, because these titles become obsolete over time. Such activities are appropriate in the model at the awareness stage for the element of career awareness. However, the breadth and depth of the other seven components of the model produce the richness of a comprehensive program and are more legitimately part of a career education program.

7. When developing infused activities for objectives which describe unobservable behavior, such as "understand" or "realize," note how such learning can be expressed in a more observable manner, such as "describe" or "compare."

8. Certain aspects of career education can be infused on a curriculum-wide basis (Egbert, Note 2).

   In teacher-made materials, depict handicapped persons, minorities, and workers of both sexes in a nonstereotyped manner.

   In illustrations, show various age groups at work.

   In examples and illustrations, represent professional, skilled, and unskilled occupations.

   Represent handicapped people in a variety of family and community roles.

9. Career education can be infused into examples, illustrations, classroom procedures and rules, and processing questions.

10. Career education can be infused by giving the content a context, an environment for application. Discuss the environment as well as the application.

11. Require students to bridge from hypothetical, impersonal examples to concrete, personal-experience examples.

12. Relate students' everyday life experiences to valuable and worthwhile world of work experiences.

13. Involve students in planning, in decision making, and in evaluating.

14. Solicit and value student opinions. Use students' advice to help solve logistic and classroom management problems.

15. Exploit interdisciplinary activities which increase opportunities to infuse many of the career education elements.

16. Have students keep journals during activities/projects which require group effort or cooperation. Have them note especially the strengths or weaknesses of their co-workers; what went well or didn't go well and why; their feelings about the work done each day; what was supposed to be achieved, what was achieved, and what is planned for tomorrow; and work-related vocabulary learned each day.

17. Use the accoutrements (forms, tools, signs, uniforms) of the world of work in the classroom.

18. Use parents and community (civic, industrial, business, church) people as resources and role models. Have students use home and community work environments for assigned activities.

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Self-Evaluation of Teaching (Practice)

Self-Evaluation of Teaching (Practice)

The evaluation of career education, like its infusion, should be unobtrusive. If possible, the evaluation of both academic and career education objectives should be combined into the same instrument. The mode of evaluation, dictated by the conditions for performance, may differ sufficiently so as to necessitate separate evaluations.

While isolated individual activities may only serve to assist in the achievement of a career education objective, the cummulative effect of a series of activities should be observable.

Many of the career education objectives deal with valuing and increased awareness. The specified behaviors are not directly observable. However, observable behaviors indirectly reflecting achievement of such objectives should be examined. The awareness level of knowing can be verified through discussion or observation.

The evaluation of the effectiveness and impact of each infusion strategy should be based on the students' ability to demonstrate achievement and to build on the skill or knowledge learned.

As a result of infusion, students benefit. What is learned from looking at what took place will help us to know how to do it again--or how not to do it when taught again. Making short-term (daily) evaluations of teaching style or strategies will be much more helpful than making overall evaluations at the end of the year or term.

Following is a worksheet, "Daily Teaching Self-Analysis," to complete after teaching the lesson. The information collected about your teaching will be beneficial for revising future plans and continuing to infuse the CCEM elements into specific content areas.

The first item on the worksheet will help you evaluate a particular lesson. By describing what happened and the process used to teach the lesson, the strengths of the lesson will be revealed. It will also help identify areas which may not have worked as well as planned.

The second item focuses on the strategy which was successfully presented to the students. By identifying the things that work well in a lesson, confidence and success in future lessons will be gained because the techniques which work best will be identified and reinforced by documentation. This understanding and confidence will promote use of this same strategy in presenting other content areas and promote additional infusion of the CCEM elements.

The third item documents what happened so that the next lesson may be planned either with new material or by revising the same lesson. Future planning will be much easier and more successfully implemented.

DAILY TEACHING SELF-ANALYSIS

Class or Content Area: _____

Time Taught: _____ Number of Students: _____

1. How did the procedures differ from those documented in the plan?

2. Describe one particular strategy that seemed to have significant success with the students.

3. Propose alternative techniques for the next time you teach this class. (It may be helpful to respond to the following beginning statements.)

   If the teacher would...(briefly describe an alternative technique here.)

   Then students would...(what behaviors would the new strategy elicit?)

   And then the teacher would...(how would I react to these behaviors?)

Who is a Good Teacher?

In addition to all that has been covered, there is one additional question that must be answered if we want to be success oriented in our classrooms. Are good teachers always organized, with lessons well planned? Do they know where they want to direct their efforts each day in the classroom? Hoyt (1981) points out that there are many variables which have prevented obtaining definitive answers. In his discussion, he states there are four conditions that do not allow a universally acceptable answer because of their complexity and relationship to each other. These four conditions are (a) the type/location of the students, (b) the demands on society and on the schools at the time of the question, (c) the teaching conditions, and (d) the personal value system of the one making the evaluation. Each of these are components of external evaluation systems and do not consider one of the most important factors for determining the answer to that question, however. One of the most important factors is attitude. This Handbook shows how our attitudes can determine how/what we teach. The examples showed the first teacher saying s/he taught fourth grade, while the second taught fourth-grade children. Though the only difference may seem to be the addition of the word "children," it reflects a value toward individualized instruction. There is a great difference between teaching fourth grade (a subject or grade) and teaching fourth-grade children (telling who, not what).

No data are available that would conclusively indicate who is a good teacher. Attitude, however, is a factor that has great influence on relationships and success in the classroom. An attitude on the part of the teacher of not caring for self-recognition, but instead, striving to help each

student become successful, is a goal that will pay dividends for both the teacher and the students. Aspe and Roebuck (1979) indicated in their research that students do not learn as much in an environment or from a teacher they don't like. The teacher's attitude is closely related to successful instruction in the classroom. How teachers view themselves and how they view their students will affect how successfully they will teach in that classroom.

This attitude directly influences how we approach the preparation of a lesson--as a subject area, or with the infusion concept. There is a choice which will help determine the success your students will have in their educational pursuits.

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Summary

Summary

For infusion to occur, career education objectives must be addressed concurrently with academic objectives. This is accomplished by analyzing the academic curriculum and seeking appropriate contexts for integration of a set of predetermined career education objectives. The most satisfactory results can be expected when the infusion is planned on a comprehensive, curriculum-wide basis, although efforts of lesser scope can have beneficial results. In either case, the design of infused student activities to implement both sets of objectives is of greatest importance to a successful outcome.

Assessing Accomplishment and Need

1. Obtain documentation of academic objectives.
2. Assemble texts, lesson plans, worksheets, and project assignments associated with each objective. These describe academic activities and the mediation chosen to achieve the academic objectives.
3. Review the objectives for each of the career education elements.
4. Systematically review for appropriateness your academic activities which assist in the achievement of career education objectives. Consider the following aspects of the activities:

   The text's illustrations, examples, and practice problems or questions.

   The orientation of follow-up (or review) questions.

   Guidelines regarding projects and assignments.

   Academic counseling given every year.

   Field trips or annual special programs in which the class participates.

   Tools and equipment associated with the specific discipline.

   Regular visitors to the classroom (school employees, parents, community workers).

   All media used (slides, films, 3-D models, charts, displays).

   Personal experiences regularly mentioned in discussions.

The extent and manner in which current events are integrated into classroom discussions.

Attitudes and appreciations that are consistently modeled.

Personal behaviors required of students and rewarded.

5. Make a tally mark on an infusion checklist (see Appendix C) for each pertinent activity identified. In a second control document, a journal with a separate section for each career education element, log each activity with a reference code for future use. Include a brief description, with a reference to the academic objective into which the activity is currently infused.

6. Combine the data from individual infusion checklists with those of charts from other departments in the school for a comprehensive look at the whole school's existing career education accomplishments.
If more than one teacher has the responsibility for teaching the same academic objectives and each teacher has the freedom to design his/her own academic activities, then individual infusion checklists and journals should be drawn up and shared to coordinate the students' career education. Writing this second set of objectives into the academic curriculum guide insures that the comprehensiveness of the career education effort is not teacher dependent.

7. Lest negativity creep in ("All this work just to say it's already being done?" "All this work just to prove career education is nothing new?"), it should be pointed out that this exercise is not intended merely as busy work. Career education is not new. It was once the primary focus of education. With time and shifts in social climate and educational philosophy, the focus of career education has become blurred. Vestiges do remain. And, because career education is a universal educational need, it continues to weave its way into curricula. However, rarely is career education provided in a comprehensive manner. That is what performing the exercise of documentation will allow.

8. Evaluate the career education program for the whole school. The master infusion checklist will show the gaps in a school's career education program. The completely empty cells are the obvious but perhaps not the only deficiencies in a program. Each tally mark on the master infusion checklist represents one activity which assists in the achievement of the associated career education objective. The skills and knowledge identified in the objectives are to be developed and reinforced throughout the students' school years. Exposure to and/or training in the knowledge or skills can come from a variety of perspectives and can occur in a variety of environments. It should be a spiraling curriculum that systematically builds on the experiences gained in the previous activities associated with that objective.

9. Design infused academic activities to fill the gaps and deficiencies in the school's career education program.

10. Complete the NPCE Curriculum Infusion Evaluation (See Appendix B) and share results with your school administration.

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Appendices

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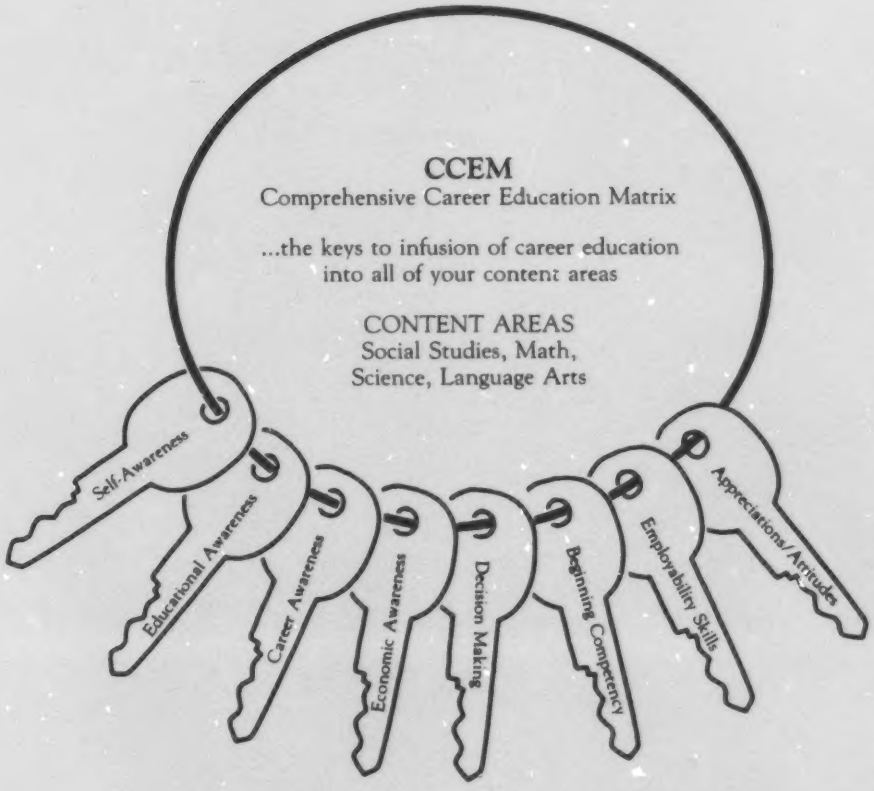
Appendix A
CCEM



CAREER EDUCATION*

A. Self-Awareness

Students will:

1. recognize their feelings.
2. learn to express their feelings in a socially acceptable manner.
3. identify short-term goals.
4. recognize the role of each family member.
5. begin to recognize the uniqueness of themselves and others.
6. recognize that individual task performance is a part of effective group membership.
7. identify responsibilities they have to others, e.g., honesty, fairness.
8. respect the feelings of others.
9. identify responsibilities they have to themselves, e.g., to perform to the best of their abilities in and out of school.
10. develop an understanding of their strengths and weaknesses, likes and dislikes, and achievements.
11. become aware of the relationship between interests, aptitudes, achievements, and occupations.
12. identify ways in which they are emotionally like and different from their peers.
13. recognize that setting priorities is an important part of setting and reaching goals.
14. describe themselves in relation to their culture through understanding and experiencing roles.
15. accept responsibilities, knowing others may depend on them to fulfill those responsibilities.
16. list others who are influenced by the way in which they perform their responsibilities.
17. become aware of the importance of hobbies, academic achievements, and athletic abilities in making choices about future occupations.
18. consider their interests and aptitudes in exploring career information.
19. recognize that each individual is unique and, therefore, is capable of unique contributions.
20. examine changes that they are undergoing as they continue to develop and mature.
21. establish personally relevant, although tentative goals.
22. recognize social, economic, educational, and cultural forces that influence their development.
23. assume responsibilities to themselves and others, and be aware of the consequences of their decisions.
24. evaluate their career goals in terms of interests, aptitudes, and achievements.

* Available from Phoenix Day School for the Deaf, 1935 Haywood Avenue, Phoenix, Arizona 85021.

25. collect information about occupations in which they might be successful.
26. accept themselves as unique persons.
27. describe their growth and continual development.
28. learn to establish goals that are important to them; realize that what they believe influences what they become and that what they believe may change as they continue to acquire knowledge.
29. define the relationship between career and self-satisfaction.
30. understand that accepting a job implies acceptance of job responsibilities and requirements.
31. demonstrate positive relationships between themselves and others when performing a job.

B. Educational Awareness

Students will:

1. recognize that learning helps them do things for themselves.
2. recognize that a relationship exists between learning and performing various tasks.
3. recognize that various occupations have different educational and training requirements.
4. develop an understanding of how and why all subject matter areas are used in various occupations.
5. become aware that classroom and outside-of-school experiences may be related.
6. become aware of the relationship between educational experiences and occupational tasks.
7. become aware that learning is a continuous process.
8. list the experiences they have outside of school which are related to school work.
9. develop an understanding of how and why all subject matter areas are used in various occupations.
10. relate skills learned in the classroom to those used by workers.
11. understand relationships between educational experiences and career selections and development.
12. become aware of the connection between in-school and out-of-school learning experiences.
13. become aware that desire and capability to learn influence their learning.
14. list the educational requirements needed for entry into occupations within selected career areas.
15. describe the need to plan an educational process to reach their selected career goals.
16. describe the relationship between levels of education and levels of employment.
17. match certain subject areas with the occupations they may lead to.
18. recognize that educational experiences are a part of their career development.

19. illustrate how participation in school activities can relate to selected career areas.
20. recognize that learning is continuous, occurring inside and outside of school.
21. become aware that out-of-school experiences can improve their capabilities in school.
22. recognize the significance of language, computational and reasoning development, and the mastery of content knowledge as a means of achieving career goals.
23. analyze the changing nature of the world of work and its effects upon the individual.
24. evaluate their progress toward tentative career goals and assess their suitability.
25. recognize that different careers require varying types of educational preparation.
26. plan the postsecondary educational experiences that will satisfy the entry-level requirements of their tentative career choices.
27. identify skills acquired in school that are relevant to selected occupations.
28. describe how school classes and activities will relate to their use of time throughout life.
29. realize that there are postsecondary programs available especially for the deaf.

C. Career Awareness

Students will:

1. become aware that present school experiences are related to certain career requirements.
2. become aware that people do different things at their work.
3. become aware of work performed in their environment.
4. become aware of the variety of occupations in the world of work.
5. recognize the interdependency of family members as workers in the home.
6. describe the relationship between some occupations and the needs of the community.
7. recognize the role of present school experiences in preparation for future career performance.
8. recognize that some jobs have specific but common requirements for job success.
9. list a variety of occupations found in the world of work.
10. identify and classify local jobs.
11. become aware of the existence and importance of the interdependency of jobs.
12. describe the way occupations relate to needs and functions of society.
13. describe career opportunities for the deaf.
14. recognize those things that influence job change and advancement.
15. review the performance requirements for various jobs.

16. become familiar with a variety of career groupings and explore the types of jobs found in each grouping.
17. identify several careers and recognize the specialized jobs related to each.
18. become aware of careers as they relate to the needs and functions of the community.
19. become aware of career characteristics within geographical locations and their relevance to job mobility.
20. determine the worker qualifications needed to perform the basic tasks of various occupations.
21. identify the relationship of personal interests to success in specific occupational areas.
22. recognize the relationship between personal aptitudes and success in specific occupational areas.
23. analyze factors that may influence their vertical and horizontal mobility in a selected career.
24. know the immediate steps necessary following high school to gain entry into their chosen careers.
25. know the detailed characteristics of their chosen fields.
26. analyze the relationship between job requirements and their personal professional goals.
27. recognize that mobile careers can cause changes in an individual's life-style.
28. become familiar with job opportunities as related to social and economic trends in their geographic area.
29. evaluate employment opportunities in their career areas based on local, regional, and national trends.

D. Economic Awareness

Students will:

1. begin to develop an awareness of the economic aspects of life-styles.
2. develop an understanding for the reasons why people work.
3. become familiar with the varied economic rewards gained from different kinds of work.
4. develop an awareness of the economic advantages and disadvantages of certain occupational roles.
5. become aware of the relationship between desired life-style and career opportunities and potential.
6. recognize that rewards usually go to those who extend the effort to gain them.
7. understand that social and economic needs and wants differ among people.
8. understand some factors which have caused social and economic benefits to differ among occupations.
9. begin to develop an understanding of the economic relationship between themselves, family, and community.
10. describe the relationship of economic trends that affect their community and state.

11. describe how money determines their life-style needs and their relationship to career opportunities.
12. describe life-style needs and their relationship to career opportunities.
13. list the range of social and economic benefits associated with various occupations.
14. identify occupational roles which are compatible with their currently expressed needs and wants.
15. develop knowledge of the relationship of economic trends in their community, state, and nation.
16. become aware of economic forecasting.
17. list the rewards of certain occupational roles.
18. become aware that individual values determine individual needs and relate to a desired standard of living.
19. list principles used in predicting economic trends in their community, state, and nation.
20. apply economic principles to assist in predicting their career futures in terms of community, state, and national employment opportunities.
21. list factors which influence them to need or want certain social and economic rewards.

E. Decision Making

Students will:

1. recognize the need to make decisions.
2. become aware of the effect their decisions have on others.
3. accept the responsibility for their decisions.
4. recognize that their decisions may not be accepted by others.
5. become proficient in using resource information to make career decisions.
6. become aware that goals made in school affect decisions outside of school.
7. recognize cause-and-effect relationships in decisions.
8. recognize the steps of the decision-making process.
9. recognize the consequences of their decisions.
10. collect information from the community relating to careers of their choice.
11. describe how their interests, aptitudes, skills, physical characteristics, educational achievements, adjustive behavior, needs, and relationships with other people all influence their goals and career decisions.
12. recognize that making decisions is required to meet personal goals.
13. demonstrate an ability to use decision-making and problem-solving skills relating to career explorations.
14. demonstrate skill in responsible decision-making behavior.
15. increase occupational and self-knowledge through the use of outside resources and experiences in the community.

16. observe people at work in order to make career decisions.
17. recognize that making decisions related to personal goals is required to make an occupational choice.
18. list job titles which represent tentative choices regarding long-range career interests.
19. explain how a given set of facts can support different decisions.
20. predict and analyze the immediate, intermediate, and long-term effects their decisions will have on themselves, family, and society.
21. describe how school and work experiences meet the needs of occupational preparation.
22. continue to acquire information in the continuing evaluation and development of their educational plans.
23. analyze their career goals and the subsequent decisions that are required by such goals.
24. make tentative plans for developing their long-range career possibilities and what is required to achieve them.

F. Beginning Competency

Students will:

1. become aware that steps are necessary to complete tasks.
2. plan simple tasks utilizing familiar resources.
3. become aware that problem-solving techniques are needed in various jobs.
4. use problem-solving techniques.
5. plan tasks considering time, tools, and materials needed for their completion.
6. become familiar with process skills and techniques of problem solving.
7. identify the need for safety as related to tools, equipment, and materials.
8. recognize the competency of expertise needed to use tools, equipment, and materials.
9. demonstrate the safe use of simple tools, equipment, and materials in the classroom.
10. list the skills necessary to locate and organize information.
11. develop cognitive skills associated with the scientific method.
12. develop the skills required to identify the objectives of a task, specify resources required, outline procedures, perform operations, and evaluate the product.
13. gain proficiency in problem-solving techniques as they apply in selected career areas.
14. increase their proficiency in the use of tools, equipment and materials needed to perform various tasks.
15. identify the variety of tools, equipment, and materials needed in a selected business or industry.
16. understand that responsibility often necessitates behavior contrary to personal preference.

17. understand how attitude can be expressed through behavior.
18. develop educational and occupational competency before moving to the next stage of preparation or entering an occupation in the career area of their choice.
19. begin to develop the skills necessary for employment in the career of their choice.
20. analyze the relationship between the skills they possess and the entry-level requirements of their chosen careers.
21. develop observation skills used to collect data needed to solve problems.
22. become familiar with the use of basic tools, equipment, and materials associated with business, commercial, and industrial activities.
23. describe how safety is related to business and industry.
24. demonstrate those interpersonal-relations skills likely to be expected of them while looking for a job.

G. Employability Skills

Students will:

1. list several differences between working independently and as a member of a group.
2. recognize that supervision may help them accomplish tasks with greater efficiency.
3. relate their qualifications for tasks at home, school, and in the community.
4. develop communication skills by following directions and directing others in task accomplishment.
5. recognize that some tasks must be done alone and some in groups or teams.
6. recognize the association between volunteering for a task and responsibility for its completion.
7. demonstrate that members of a group may accomplish tasks by having each person specialize in a particular part.
8. complete school tasks for which they are qualified.
9. relate their qualities, aptitudes, and interests to jobs.
10. recognize the implications of working with and without supervision, independently, and with others.
11. recognize the difference between an entry-level job and future mobility within that job cluster.
12. understand that working independently may involve varying degrees of responsibility.
13. use information about their interests, attitudes, and qualifications to refine their identification of potential career choices.
14. complete job application forms using personal interests, aptitudes, and qualifications information.
15. prepare letters, applications, resumes, and references related to career placement.
16. develop the work habits and attitudes necessary to enter an occupation of their choice.

17. refine their social skills necessary for employability.
18. demonstrate communication, writing, and research skills appropriate to career placement.
19. meet the requirements necessary for their post-high-school career choices.
20. complete simulated or real job-seeking tasks.
21. understand the advantages, disadvantages, and responsibilities of their career choices.
22. understand the requirements and value of supervision.
23. present an accurate description of education, training, experience, and information about themselves to potential employers through a variety of ways such as interviews, tests, and application forms.
24. identify several potential careers in which they have an interest and aptitude.

H. Appreciations and Attitudes

Students will:

1. identify community workers that provide services for their families.
2. identify things they enjoy doing in their extra time and how those things contribute to their self-satisfaction.
3. participate in the arts, sharing their ideas with others.
4. realize that they and their families depend on the jobs of others to help meet their needs.
5. realize that leisure time can be productive as well as self-satisfying.
6. become aware of the variety as well as the uniqueness of art forms, e.g., dancing, painting, sculpture, and music.
7. become aware of the community services and organizations available at the local, state, and national levels designed for deaf citizens.
8. analyze the interdependency of jobs within the community.
9. understand why they and their families are dependent upon services performed within their community.
10. realize that continual learning is essential to their growth and maturity.
11. explore leisure-time experiences and how they contribute to self-satisfaction and enjoyment.
12. develop an understanding of art as it relates to self and society.
13. understand and appreciate the relationship of work, continual learning, the arts, and leisure in achieving social responsibility and self-satisfaction.
14. become aware of the community services and organizations available at the local, state, and national levels designed for deaf citizens.
15. tentatively choose a career and analyze the common and unique characteristics of that career.
16. tentatively choose a career and identify how continual on-the-job learning can contribute to professional and personal satisfaction.
17. define the roles of leisure and the arts in achieving self-satisfaction.

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Appendix B
Evaluation Instrument

Evaluation of the implementation of infusion can be accomplished with the instrument which follows. Use this evaluation instrument after trained staff members have developed a comprehensive career education program. Results of this evaluation should be shared with the school administration.

Directions

Now that you have worked through the daily evaluation on each lesson taught, you are ready to begin work on the overall lessons in the curriculum. The following pages provide you with a checklist for curriculum infusion evaluation. For question 1, you may wish to work through this evaluation by selecting the content area which you are teaching, rather than focusing on the broader aspects of the entire curriculum. For example, if you teach math, identify the grades or levels in which infusion has been successful.

In answering question 2, identify the number of times appropriate strategies have been used. You may wish to indicate, as well, those strategies which were used but which may have been determined as unsuccessful.

Question 3 refers to stereotyping intervention. Select any techniques which may have been utilized.

Questions 4 and 5 look at the content area, its relationship to the entire curriculum and facility, and curriculum models.

Question 6 reflects accessibility of goals and objectives.

SCHOOL _____

TEAM LEADER _____

NPCE Curriculum Infusion Evaluation*

1. Have instructional activities relating to career education been infused into any of the following subject areas? Check those which apply, and check all appropriate grades or levels.

	GRADE/LEVEL												
	Pre	K	1	2	3	4	5	6	7	8	9	10	11	12
___ a. Social Studies														
___ b. History														
___ c. Science specify course(s) _____														
___ d. Health														
___ e. Mathematics														
___ f. English/Language Arts														
___ g. Reading/Literature														
___ h. Physical Education														
___ i. Vocational Education specify course(s) _____														
___ j. Others (specify) _____ _____														

2. Do instructional activities in the classroom reflect your career education goals by using any of the following? Check appropriate items on the left and estimate the frequency of use per year for each strategy.

	How Often/Year
___ a. field trips	_____
___ b. workers' visits to the class	_____
___ c. separate course on career education	_____

* Handbook on infusion. NPCE technical assistance package. Rochester, New York: National Project on Career Education, 1981.

How Often/Year

___ d. mock interviews or rehearsals for interviews _____

___ e. career informational handouts or brochures _____

___ f. resource center or library for CE games, readings, etc. _____

___ g. audiovisuals/captioned media _____

___ h. role playing _____

___ i. presentation/discussion _____

___ j. class projects _____

___ k. team teaching _____

___ l. simulated work experiences _____

___ m. individualized activity packets _____

___ n. parent involvement in CE objectives or activities _____

___ o. others (specify) _____

_____

_____

3. Has any stereotyping intervention been accomplished to eliminate negative or low job aspirations for minority and/or handicapped students? Please check all appropriate items that apply.

___ a. Curriculum was reviewed by a formal committee to identify and eliminate stereotypes.

___ b. Some existing materials were dropped because of stereotyped examples.

___ c. New materials were purchased which have been recommended as nonstereotyping.

___ d. Lessons were rewritten to focus on nontraditional, unstereotyped occupations.

4. Has the curriculum been evaluated for career education objectives by any of the following methods? Please check all appropriate items that apply.

___ a. Formal committee or career education team evaluated entire curriculum.

___ b. Individual teachers evaluated their courses.

___ c. Department faculty evaluated their courses.

___ d. State guidelines were already established (syllabus) and adhered to by the school.

5. Has your school adopted

___ a. the CCEM model?

___ b. another CE model? (name) _____

___ c. portions of various models?
(identify) _____

_____

_____

6. Are the academic and vocational curriculum goals or objectives in your school

___ a. documented in writing?

___ b. new?

___ c. revised? date _____

___ d. infused with CE?

___ e. available for external dissemination?

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Appendix C
Infusion Checklist

This matrix specifies an entire career education curriculum and overlays the career education objectives with the four basic academic subjects for each level of the school program.

The checklist is most useful as a starting point to analyze an academic program and identify where career education content is already infused. It is expected that gaps in the career education curriculum will then be filled via a curriculum development effort accomplished by trained faculty.

INFUSION CHECKLIST

Directions: Using the key below, check the areas in your program which reflect the place where each CE objective is taught. Note that only the basic academic areas are included. Other content, like physical education, art, music, etc. may also be checked by constructing a grid like that below.

Key:
SS = Social Studies, History, Sociology, Citizenship Education, etc.
M = Arithmetic, Math, Algebra, Geometry, Computer Science, etc.
S = Science, Health, Biology, Chemistry, Astronomy, etc.
L = Language Arts, Reading, Speech, Writing, Composition, English, Foreign Languages, etc.

CE CURRICULUM*

SCHOOL PROGRAM

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
A. Self Awareness Students will:																
1. recognize their feelings.																
2. learn to express their feelings in a socially acceptable manner.																
3. identify short-term goals.																
4. recognize the role of each family member.																
5. begin to recognize the uniqueness of themselves and others.																
6. recognize that individual task performance is a part of effective group membership.																
7. identify responsibilities they have to others, e.g., honesty, fairness.																
8. respect the feelings of others.																
9. identify responsibilities they have to themselves, e.g., to perform to the best of their abilities in and out of school.																

* Phoenix Day School for the Deaf, 1935 West Haywood Avenue, Phoenix, AZ 85021.

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
10. develop an understanding of their strengths and weaknesses, likes and dislikes, and achievements.																
11. become aware of the relationship between interests, aptitudes, achievements, and occupations.																
12. identify ways in which they are emotionally like and different from their peers.																
13. recognize that setting priorities is an important part of setting and reaching goals.																
14. learn about themselves in relation to their culture through understanding and experiencing roles.																
15. understand that when they accept responsibilities, others may depend on them to fulfill those responsibilities.																
16. understand that others are influenced by the way in which they perform their responsibilities.																
17. become aware of the importance of hobbies, academic achievements, and athletic abilities in making choices about future occupations.																
18. consider their interests and aptitudes in exploring career information.																
19. recognize that each individual is unique, and, therefore, is capable of unique contributions.																
20. examine changes that they are undergoing as they continue to develop and mature.																
21. learn to establish personally relevant, although tentative goals.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
22. understand and recognize forces, such as social, economic, educational, and cultural, that influence their development.																
23. understand that they have responsibilities to themselves and others, and must be aware of the consequences of their decisions.																
24. evaluate their career goals in terms of interests, aptitudes, and achievements.																
25. develop understandings of occupations in which they might be successful.																
26. accept themselves as unique persons.																
27. understand that they are growing and continually developing persons.																
28. learn to establish goals that are important to them; realize that what they believe influences what they become and that what they believe may change as they continue to acquire knowledge.																
29. understand the relationship between career and self satisfaction.																
30. understand that accepting a job implies acceptance of job responsibilities and requirements.																
31. understand the need for positive relationships between themselves and others to perform a job.																
B. Educational Awareness Students will:																
1. recognize that learning helps them do things for themselves																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
2. recognize that a relationship exists between learning and performing various tasks.																
3. recognize that various occupations have different educational and training requirements.																
4. develop an understanding of how and why all subject matter areas are used in various occupations.																
5. become aware that classroom and outside-of-school experiences may be related.																
6. become aware of the relationship between educational experiences and occupational tasks.																
7. become aware that learning is a continuous process.																
8. become aware of the experiences they have outside of school which are related to school work.																
9. develop an understanding of how and why all subject matter areas are used in various occupations.																
10. relate skills learned in the classroom to those used by workers.																
11. understand relationships between educational experiences and career selections and development.																
12. become aware of the connection between in-school and out-of-school learning experiences.																
13. become aware that desire and capability to learn influence their learning.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
14. understand the educational requirements needed for entry into occupations within selected career areas.																
15. understand the need to plan an educational process to reach their selected career goals.																
16. understand the relationship between levels of education and levels of employment.																
17. understand that proficiency in certain subject areas is necessary to enter certain occupations.																
18. recognize that educational experiences are a part of their career development.																
19. illustrate how participation in school activities can relate to selected career areas.																
20. recognize that learning is continuous, occurring inside and outside of school.																
21. become aware that out-of-school experiences can improve their capabilities in school.																
22. recognize the significance of language, computational and reasoning development, and the mastery of content knowledge as a means of achieving career goals.																
23. analyze the changing nature of the world of work and its effects upon the individual.																
24. evaluate their progress toward tentative career goals and assess their suitability.																
25. recognize that different careers require varying types of educational preparation.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
26. plan the postsecondary educational experiences that will satisfy the entry-level requirements of their tentative career choices.																
27. identify skills acquired in school that are relevant to selected occupations.																
28. understand how school classes and activities will relate to their use of time throughout life.																
29. realize that there are postsecondary programs available especially for the deaf.																
C. Career Awareness Students will:																
1. become aware that present school experiences are related to certain career requirements.																
2. become aware that people do different things at their work.																
3. become aware of work performed in their environment.																
4. become aware of the variety of occupations in the world of work.																
5. recognize the interdependency of family members as workers in the home.																
6. understand how the performance of some occupations meets the needs of the community.																
7. recognize the role of present school experiences in preparation for future career performance.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
8. recognize that some jobs have specific but common requirements for job success.																
9. understand the variety of occupations found in the world of work.																
10. identify and classify local jobs.																
11. become aware of the existence and importance of the interdependency of jobs.																
12. understand the way in which occupations relate to needs and functions of society.																
13. gain understanding of career opportunities for the deaf.																
14. recognize those things that influence job change and advancement.																
15. review the performance requirements for various jobs.																
16. become familiar with a variety of career groupings and explore the types of jobs found in each grouping.																
17. identify several careers and recognize the specialized jobs related to each.																
18. become aware of careers as they relate to the needs and functions of the community.																
19. become aware of career characteristics within geographical locations and their relevance to job mobility.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
20. determine the worker qualifications needed to perform the basic tasks of various occupations.																
21. identify the relationship of personal interests to success in specific occupational areas.																
22. recognize the relationship between personal aptitudes and success in specific occupational areas.																
23. analyze factors that may influence their vertical and horizontal mobility in a selected career.																
24. know the immediate steps necessary following high school to gain entry into their chosen careers.																
25. know the detailed characteristics of their chosen fields.																
26. analyze the relationship between job requirements and their personal and professional goals.																
27. recognize that mobile careers can cause changes in an individual's life-style.																
28. become familiar with job opportunities as related to social and economic trends in their geographic area.																
29. evaluate employment opportunities in their career areas based on local, regional, and national trends.																
D. Economic Awareness Students will:																
1. begin to develop an awareness of the economic aspects of life-styles.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
2. develop an understanding for the reasons why people work.																
3. become familiar with the varied economic rewards gained from different kinds of work.																
4. develop an awareness of the economic advantages and disadvantages of certain occupational goals.																
5. become aware of the relationship between desired life-style and career opportunities and potential.																
6. recognize that rewards usually go to those who extend the effort to gain them.																
7. understand that social and economic needs and wants differ among people.																
8. understand some factors which have caused social and economic benefits to differ among occupations.																
9. begin to develop an understanding of the economic relationship between themselves, family, and community.																
10. understand the relationship of economic trends that affect their community and state.																
11. understand that money may determine their life-style needs and their relationship to career opportunities.																
12. understand life-style needs and their relationship to career opportunities.																
13. understand the range of social and economic benefits associated with various occupations.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
14. identify occupational roles which are compatible with their currently expressed needs and wants.																
15. develop knowledge of the relationship of economic trends in their community, state, and nation.																
16. become aware of economic forecasting.																
17. understand the rewards of certain occupational goals.																
18. become aware that individual values determine individual needs and relate to a desired standard of living.																
19. become aware of principles used in predicting economic trends in their community, state, and nation.																
20. apply economic principles to assist in predicting their career futures in terms of community, state, and national employment opportunities.																
21. understand factors which influence them to need or want certain social and economic rewards.																
E. Decision Making Students will:																
1. recognize the need to make decisions.																
2. become aware of the effect their decisions have on others.																
3. accept the responsibility for their decisions.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
4. recognize that their decisions may not be accepted by others.																
5. become proficient in using resource information to make career decisions.																
6. become aware that goals made in school affect decisions outside of school.																
7. recognize cause-and-effect relationships in decisions.																
8. recognize the steps of the decision-making process.																
9. recognize the consequences of their decisions.																
10. collect information from the community relating to careers of their choice.																
11. understand that their interests, aptitudes, skills, physical characteristics, educational achievements, adjustive behavior, needs, and relationships with other people all influence their goals and career decisions.																
12. recognize that making decisions is required to meet personal goals.																
13. demonstrate an ability to use decision-making and problem-solving skills relating to career explorations.																
14. demonstrate skill in responsible decision-making behavior.																
15. increase occupational and self-knowledge through the use of outside resources and experiences in the community.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
16. have experiences whereby they can observe people at work in order to make career decisions.																
17. recognize that making decisions related to personal goals is required to make an occupational choice.																
18. make tentative choices regarding long-range career interests.																
19. understand that a given set of facts can support different decisions.																
20. predict and analyze the immediate, intermediate, and long-term effects their decisions will have on themselves, family, and society.																
21. understand how school and work experiences meet the needs of occupational preparation.																
22. continue to acquire information in the continuing evaluation and development of their educational plans.																
23. analyze their career goals and the subsequent decisions that are required by such goals.																
24. make tentative plans for developing their long-range career possibilities and what is required to achieve them.																
F. Beginning Competency Students will:																
1. become aware that steps are necessary to complete tasks.																
2. plan simple tasks utilizing familiar resources.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
3. become aware that problem-solving techniques are needed in various jobs.																
4. use problem-solving techniques.																
5. plan tasks considering time, tools, and materials needed for their completion.																
6. become familiar with process skills and techniques of problem solving.																
7. identify the need for safety as related to tools, equipment, and materials.																
8. recognize the competency of expertise needed to use tools, equipment, and materials.																
9. demonstrate the safe use of simple tools, equipment, and materials in the classroom.																
10. understand the skills necessary to locate and organize information.																
11. develop cognitive skills associaced with the scientific method.																
12. develop the skills required to identify the objectives of a task, specify resources required, outline procedures, perform operations, and evaluate the product.																
13. gain proficiency in problem-solving techniques as they apply in selected career areas.																
14. increase their proficiency in the use of tools, equipment, and materials needed to perform various tasks.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
15. identify the variety of tools, equipment, and materials needed in a selected business or industry.																
16. understand that responsibility often necessitates behavior contrary to personal preference.																
17. understand how attitude can be expressed through behavior.																
18. develop educational and occupational competency before moving to the next stage of preparation or entering an occupation in the career area of their choice.																
19. begin to develop the skills necessary for employment in the career of their choice.																
20. analyze the relationship between the skills they possess and the entry-level requirements of their chosen careers.																
21. develop observation skills used to collect data needed to solve problems.																
22. become familiar with the use of basic tools, equipment, and materials associated with business, commercial, and industrial activities.																
23. understand safety as related to business and industry.																
24. demonstrate those interpersonal-relations skills likely to be expected of them while looking for a job.																
G. Employability Skills Students will:																
1. understand the differences between working independently and as a member of a group.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
2. recognize that supervision may help them accomplish tasks with greater efficiency.																
3. relate their qualifications for tasks at home, school, and in the community.																
4. develop communication skills by following directions and directing others in task accomplishment.																
5. recognize that some tasks must be done alone and some in groups or teams.																
6. recognize the association between volunteering for a task and responsibility for its completion.																
7. understand that members of a group may accomplish tasks by having each person specialize in a particular part.																
8. be given the opportunity to complete school tasks for which they are qualified.																
9. relate their qualities, aptitudes, and interests to jobs.																
10. recognize the implications of working with and without supervision, independently, and with others.																
11. recognize the difference between an entry-level job and future mobility within that job cluster.																
12. understand that working independently may involve varying degrees of responsibility.																
13. use information about their interests, attitudes, and qualifications to refine their identification of potential career choices.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
H. Appreciations and Attitudes Students will:																
1. identify community workers that provide services for their families.																
2. identify things they enjoy doing in their extra time and how those things contribute to their self-satisfaction.																
3. participate in the arts, sharing their ideas with others.																
4. realize that they and their families depend on the jobs of others to help meet their needs.																
5. realize that leisure time can be productive as well as self-satisfying.																
6. become aware of the variety as well as the uniqueness of art forms, e.g., dancing, painting, sculpture, and music.																
7. become aware of the community services and organizations available at the local, state, and national levels designed for deaf citizens.																
8. analyze the interdependency of jobs within the community.																
9. understand why they and their families are dependent upon services performed within their community.																
10. realize that continual learning is essential to their growth and maturity.																
11. explore leisure-time experiences and how they contribute to self-satisfaction and enjoyment.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
14. complete job application forms using personal interests, aptitudes, and qualifications information.																
15. prepare letters, applications, resumes, and references related to career placement.																
16. develop the work habits and attitudes necessary to enter an occupation of their choice.																
17. refine their social skills necessary for employability.																
18. demonstrate communication, writing, and research skills appropriate to career placement.																
19. meet the requirements necessary for their post-high-school career choices.																
20. complete simulated or real job-seeking tasks.																
21. understand the advantages, disadvantages, and responsibilities of their career choices.																
22. understand the requirements and value of supervision.																
23. present an accurate description of education, training, experience, and information about themselves to potential employers through a variety of ways such as interviews, tests, and application forms.																
24. identify several potential careers in which they have an interest and aptitude.																

	P-3				4-6				7-9				10-12			
	SS	M	S	L	SS	M	S	L	SS	M	S	L	SS	M	S	L
12. develop an understanding of art as it relates to self and society.																
13. understand and appreciate the relationship of work, continual learning, the arts, and leisure in achieving social responsibility and self-satisfaction.																
14. tentatively choose a career and analyze the common and unique characteristics of that career.																
15. tentatively choose a career and identify how continual on-the-job learning can contribute to professional and personal satisfaction.																
16. understand the roles of leisure and the arts in achieving self-satisfaction.																

National Project on Career Education

Appendix D
Infusion Examples

Appendix D contains three examples of content areas which were developed to illustrate a versatile application of the CCEM. They are second-grade health, ninth-grade American history, and fifth-grade math that have infused CCEM elements for that grade level and content. In addition, reading curriculum samples provided by Marianne DeLuca from the Berkeley curriculum (California School for the Deaf — now at Fremont) are included as examples of infusion without reference to the CCEM.

Example 1:

Second-Grade Health

Through class discussion, demonstration, and visuals of proper tooth care, each second-grade student will understand how to care for his/her teeth. Examples of tooth-building food groups will also be given. Upon completion of this unit, each student will demonstrate his/her understanding by drawing a line from a picture or printed name of a nutritious food item to a picture of healthy teeth. Each student will "X" out the incorrect food item. Each student will complete this task with 90% accuracy.

Audience: ...each second-grade health student...

Behavior: ...demonstrate his/her understanding by drawing a line...from food item to a picture of healthy teeth...."X" out incorrect...

Condition: ...class discussion, demonstration, and visuals...examples of tooth-building food groups...

Degree: ...90% accuracy.

The unit requirements and activities to meet these requirements would lead to the infusion of the following CCEM concepts (see Appendix A). Each concept is given with a brief suggestion for how it could be covered in the content area lesson.

Self-Awareness

Students will:

7. identify responsibilities they have to others, e.g., honesty, fairness.

9. identify responsibilities they have to themselves, e.g., to perform to the best of their abilities in and out of school.

These two concepts could be covered by the teacher as s/he discusses how good eating habits and tooth care habits are a responsibility of students to their own tooth care. The teacher should also point out that by being a good example, they may influence others to follow their example.

Educational Awareness

Students will:

1. recognize that learning helps them do things for themselves.
2. recognize that a relationship exists between learning and performing various tasks.
5. become aware that classroom and outside-of-school experiences may be related.

The teacher could help introduce these concepts by demonstrating and discussing the proper brushing and eating habits for healthy tooth care. This could be enhanced by inviting a guest speaker to discuss the training and educational experiences of his/her years in dental school.

3. recognize that various occupations have different educational and training requirements.

This requirement could best be met by the students learning about the training and educational requirements from the guest speaker when s/he talks with the class about dental care.

Beginning Competency

Students will:

1. become aware that steps are necessary to complete tasks.

3. become aware that problem-solving techniques are needed in various jobs.

These concepts would best be covered by the guest speaker as s/he describes how to care for teeth. The speaker could also discuss how an awareness of pain helps him/her know the steps needed to solve a problem with a toothache, a cavity, or how an awareness of information (data) will help reading X-rays.

Employability Skills

Students will:

1. understand the difference between working independently or as a member of a group.

The teacher could help the students understand this concept by asking the guest speaker to comment on the difference between working as an independent or member of a group.

4. develop communication skills by following directions and directing others in task accomplishment.

This concept could be covered by having the students teach each other how to brush their teeth, how to select the proper foods, what to do if you have a toothache, etc.

Appreciations and Attitudes

Students will:

1. identify community workers that provide services for their families. The dentist is one of many community helpers that each student becomes familiar with. This unit will give the student an understanding of what one of these community helpers (the dentist) does.

The selection of these concepts would influence the teacher to plan a strategy to teach the unit through examples of proper eating habits, foods, tooth care, and a visiting dentist. After the dentist talked with the children about dental care and demonstrated how to care for the teeth, discussion could follow up each of these areas. By the end of the unit, each student would not only be aware of good dental care, but would also be aware of many of the CCEM concepts. They would not be separate; they would be infused into the content area.

Career Awareness

Students will:

6. understand how the performance of some occupations meets the needs of the community.

The guest speaker could help the students understand this concept by talking about community helpers and how they provide services to the community. The teacher could facilitate this by questions and class discussion.

Economic Awareness

Students will:

2. develop an understanding for the reasons why people work.

3. become familiar with the varied economic rewards gained from different kinds of work.

A class discussion on why a person needs to work (food, clothing, shelter, health/dental care) would help the students understand concept 2. Further discussion of the kinds of clothes, shelter, and health care would bring about an understanding of concept 3.

Decision Making

Students will:

2. become aware of the effect their decisions have on others.
3. accept the responsibility for their decisions.
4. recognize that their decisions may not be accepted by others.

Some simple questions which might generate a discussion on decision making are: What would happen if you never brushed your teeth and were always eating candy? How would they affect other? How would you react if someone wanted you to stop brushing your teeth?

1. recognize the need to make decisions.
6. become aware that goals made in school affect decisions outside of school.

Discussion and the guest speaker could help the students understand that by learning the proper care and making a decision to follow the process for proper care of the teeth, each student would benefit at home and all his/her life after school.

Example 2:

Ninth-Grade American History

Given the description and historical facts on Jamestown and Plymouth in assigned reading, movie, and class notes, each American-history student will be able to describe, orally and/or in sign language, the differing life styles of the two colonial American settlements. In addition to the oral discussion of these differences, each student will list, on paper, at least five different occupations in each settlement and describe how the occupations and family life-styles compare to occupations and life-styles of today. The paper will be graded pass/fail.

Audience: ...each American-history student...

Behavior: ...describe...orally...differing life-styles of the two settlements...list occupations...compare to occupations and life-styles of today.

Condition: Given...historical facts on Jamestown and Plymouth...through assigned reading, media, and class notes...

Degree: ...list at least five different occupations in each colonial settlement...compare to occupations...of today...graded pass/fail.

The class requirements and activities infuse the following CCEM concepts (see Appendix A). Each concept is given with a brief suggestion for how it could be covered in the class.

Self-Awareness

Students will:

19. recognize that each individual is unique and, therefore, is capable of unique contributions.

22. understand and recognize forces such as social, economic, educational, and cultural, that influence their development.

Each of these concepts would be covered by the readings, movie, and class discussion on how every family and settlement member had a skill/job that was unique, yet was dependent upon those around for success. Students would also be able to understand how these skills were influenced by the class system, education, and economics.

Educational Awareness

Students will:

14. understand the educational requirements needed for entry into occupations within selected career areas.

15. understand the need to plan an educational process to reach their selected career goals.

16. understand the relationship between levels of education and levels of employment.

Class discussion after the readings and film should help the teacher point out the importance of preparing for an occupation in the early settlement times, i.e., there was a selection process for the apprentice, etc. The class could relate that to today's preparation needed for a field of interest.

Career Awareness

Students will:

14. recognize those things that influence job change and advancement.

18. relate careers to the needs and functions of the community.

19. become aware of career characteristics within geographical locations and their relevance to job mobility.

Each of these concepts would be clarified through the reading, film, and discussion. Research into different occupations and how they relate to occupations and life-styles today could bring this into better focus.

Economic Awareness

Students will:

11. describe how money may determine their life-style.

12. relate life-style needs to career opportunities.

The life-styles of the colonial settlements were tied to the economics of that time. Each of the occupations were, also, related to the times. These concepts would be understood through class discussion.

Decision Making

Students will:

13. demonstrate an ability to use decision-making and problem-solving skills relating to career explorations.

18. make tentative choices regarding long-range career interests.

Each of these concepts could be covered very well if the teacher had each of the students select an occupation of those early times and support why they would like to do that today.

Beginning Competency

Students will:

15. identify the variety of tools, equipment, and materials needed in a selected business or industry (at the time of the colonial times and at present).

16. understand that responsibility often necessitates behavior contrary to personal preference.

Students will read about the responsibility and necessity of the wage earner in those days to know how to use and repair the tools, equipment, and materials for survival. Students could discuss the early settlers' 14-hour or longer work day.

Employability Skills

Students will:

10. recognize the implications of working with and without supervision, independently, and with others.

This concept could best be understood if the apprenticeship system was discussed as part of the colonial settlement structure. This could be covered by having a guest speaker from one of the trade unions or by showing a film.

Appreciations and Attitudes

Students will:

8. analyze the interdependency of jobs within the community.
9. understand why they and their families are dependent upon services performed within their community.

These two concepts could be covered by the same information and activities the teacher dealt with when covering concepts 19 and 22 of Self-Awareness.

The selection of these concepts would influence the teacher to plan (strategy) to teach the lesson through the use of readings, films and/or filmstrip of the two colonial communities, and with discussion of the occupations and life-styles in the two communities. After the students read and/or viewed the material and participated in the class discussion on the class content, they would become aware of each of the CCEM concepts listed. Interest and ability level would determine how the material was covered and to what depth these career education concepts were covered.

Example 3:

Fifth-Grade Math--Review of Addition and Subtraction

Given written examples and demonstrations by the teacher of addition and subtraction of running columns of three- and four-place numbers, each fifth-grade math student will demonstrate an understanding of this concept by completing teacher-assigned worksheets. Upon successful completion of these worksheets, each student will demonstrate his/her ability to balance a checkbook with 100% accuracy.

Audience: ...each fifth-grade math student....

Behavior: ...will demonstrate understanding of...concept...of addition and subtraction of running columns of...numbers....will demonstrate ...ability to balance a checkbook.

Condition: given written examples...demonstration...completing teacher-assigned worksheets.

Degree: ...balance a checkbook with 100% accuracy.

The class requirements and activities to meet those requirements would lead to the infusion of the following CCEM concepts (see Appendix A). Each concept is given with a brief suggestion for how it could be covered in the class.

Self-Awareness

Students will:

10. understand their strengths and weaknesses, likes and dislikes, and achievements.

For this concept, each of the teacher's directed activities will help students to understand how this strength (or weakness) for math would be reason for them to achieve at a job requiring math--or to choose another profession--according to their interest and ability in math.

15. understand that when they accept responsibilities, others may depend on them to fulfill those responsibilities.
16. understand that others are influenced by the way in which they perform their responsibilities.

The teacher can cover these concepts through class discussion both before and after a field trip to the bank to see how everyone works together, yet how each is responsible for a part of the total process.

Educational Awareness

Students will:

9. develop an understanding of how and why all subject matter areas are used in various occupations.
10. relate skills learned in the classroom to those used by workers.
11. describe the relationships between educational experiences and career selections and development.
12. become aware of the connection between in-school and out-of-school learning experiences.

These four concepts can best be covered through class discussion on how the activities and skills in math are directly related to the learning and occupational growth that takes place after school. Examples of checking

and savings account balancing, plus a guest speaker and field trip, would generate the discussion to bring about a better understanding of these concepts.

Career Awareness

Students will:

7. recognize the role of present school experiences in preparation for future career performance.

This concept can be covered during the discussion of liking to work with math and relating that interest to a lifetime of working with figures. This could be a question for the guest speaker: "Why do you like working with figures and numbers?"

8. recognize that some jobs have specific but common requirements for job success.

The guest speaker and the field trip are two ways this concept could be covered.

11. define the interdependency of jobs.
12. describe the way occupations relate to needs and functions of society.

These two concepts would be covered through the experience of the field trip and the class discussion afterwards on why we need banks and why businesses depend on them for existence.

13. gain understanding of career opportunities for the deaf.

This concept would be covered by having a deaf banker or accountant come to the class and talk with the students.

Economic Awareness

Students will:

4. develop an awareness of the economic advantages and disadvantages of certain occupational roles.
5. become aware of the relationship between desired life-style and career opportunities and potential.
6. recognize that rewards usually go to those who extend the effort to gain them.

Each of these concepts would be covered by having a deaf role model come to the classroom. S/he would be able to respond to each of these three topics: money, values, and life-styles. The guest could be presented with the three topics ahead of time, or the students could prepare their questions ahead of time.

Decision Making

Students will:

7. recognize cause-and-effect relationships in decisions.
8. recognize the steps of the decision-making process.
9. recognize the consequences of their decisions.

Each of these would be covered in the discussion after the field trip to the bank. The consequences of not having enough money to cover a check written for something not needed at the time would be a good point to ponder. Who does it effect? Why?

11. understand that their interests, aptitudes, skills, physical characteristics, educational achievements, adjustive behavior, needs, and relationships with other people all influence their goals and career decisions.

After the exercises in class, the field trip, the guest speaker, and the discussion, each student would understand that many factors influence their decisions.

Beginning Competency

Students will:

10. understand the skills necessary to locate and organize data.

Learning how to balance a checkbook will help the student understand why a person needs skill in the proper location of information (decimal point, interest, service charge, etc.) in order to have correct balance sheet.

Employability Skills

Students will:

5. recognize that some tasks must be done alone and some in groups or teams.
7. understand that members of a group may accomplish tasks by having each person specialize in a particular part.

These concepts will be understood after the student has learned to write a check and then visited the bank to see how individuals and teams of people work together to process the information on the check.

Appreciations and Attitudes

Students will:

4. realize that they and their families depend on the jobs of others to help meet their needs.

This concept would best be covered by discussion after the field trip to the bank, where they see how many people are needed to process the checks that people write.

The selection of these concepts would influence the teacher to plan (strategy) to teach the lesson through using examples by demonstration and practice of these skills. To enhance the importance of the skills learned, the teacher could have a hearing impaired accountant or banker come to the class and talk about maintaining a checkbook. If time were available, there could be a follow-up visit to the bank to help the students understand the process a written check goes through. Class discussion of the skills and concepts learned would cover each of the areas selected.

Example 4:

Reading Curriculum Samples: CSDB*

This section contains sample pages from the reading curriculum developed at the California School for the Deaf, Fremont (formerly Berkeley) in 1975. An explanation for the format of the skill pages appears below.

In the 1975 curriculum, a page of academic learning activities was written to accompany each skill page. At the present time, the school is adding pages of sample career education learning activities to correlate with the curricular academic and functional skills. The related career education goals established at the school are also identified for the activities and correspond in general to the concepts listed in the CCEM model.

The career education learning activities are suggestions and should not limit the activities and experiences that the teachers provide for the students. They are written informally so that the teachers can incorporate them into their program of behavioral goals and objectives. This is only one method that the school is using in the total infusion process.

Explanation of the Critical Skills Pages

The foundation of this curriculum are the statements that describe the sequential development of a skill by a student. Each skills list begins at a very simple level and continues to the highest level deemed necessary

* DeLuca, M. Reading curriculum documents. Fremont, California: California School for the Deaf, 1975.

for the students to function to the utmost of his ability. These statements are called critical skills and are numbered on the left-hand side of each page. The skills lists were chosen as the most practical means of maintaining a continuum in the educational program from one department to another, and from one grade to the next. They help guide teachers toward common goals and induce the teachers to work as a team, giving each student a continuum that makes it possible for him/her to advance at the most efficient rate.

Check marks are used to show approximately at which grade level the skill should first be introduced and the grade level when it should be mastered. It is assumed that informal presentation of a skill can begin before the initial check mark and that review can continue after the last check mark.

Program exit levels are designated above the critical skills and check marks on each page as Prep II, Grade 3, Grade 6, Grade 8, and Grade 12. These levels were selected as the allotted time periods to formally test the students on the skills to assure progress and continuity. The program objectives at each exit cover the skills, in general, finalized at that grade level.

The student ability level corresponding to the curriculum is noted at the top of each page. Level A contains skills geared toward a potentially college-bound student, Level B for the average student who may enter the field of employment or a program of further formal education, and Level C to the student who benefits most from learning very practical skills. The subject itself has been divided into areas and subcategories named at the top of each critical skills page.

FUNCTIONAL READING — THE STUDENT AS AN EMPLOYEE
READING AREA — SUBCATEGORY

Program Level Objectives

Grade 8 Exit — Given a chart for recording absences and a set of attendance blanks, the student will record the daily absences, fill out the attendance blanks, and turn them in to the proper place on time for 2 weeks with 90% accuracy.

Grade 12 Exit — In a classroom having a mock business with notices and messages on a bulletin board, the student will interpret 3 out of 5 notices, thereby showing that s/he understands the key information.

CRITICAL SKILLS	P 1	P 2	1	2	3	4	5	6	7	8	9	10	11	12
1. Rules and regulations. (Impress upon the student the need to seek assistance in this area in real life.)														
a. Understands and complies with posted signs and printed notices and regulations at this place of business.									✓	✓	✓	✓	✓	✓
b. Understands and follows written instructions from a superior.									✓	✓	✓	✓	✓	✓
2. Bulletins. (Impress upon the student the need to seek assistance in this area in real-life situations.)														
a. Recognizes a work bulletin as a message to the employee.									✓	✓	✓	✓	✓	✓
b. Understands and responds appropriately to bulletin.									✓	✓	✓	✓	✓	✓
3. Reports (absence, evaluation). (Impress upon the student the need to seek assistance in this area in real-life situations.)														
a. Recognizes and interprets special vocabulary on absence and evaluation forms.												✓	✓	✓
b. Writes appropriate information on form blanks.												✓	✓	✓

FUNCTIONAL READING — READING AREA

THE STUDENT AS AN EMPLOYEE — SUBCATEGORY

Program Level Objectives

Grade 8 Exit — Given an application for a job provided by the school or the teacher, the student will fill out the application with 50% accuracy.

Grade 12 Exit — Given a list of 20 insurance terms, the student will define the meaning of each term in his own words orally with 75% accuracy.

CRITICAL SKILLS	P 1	P 2	1	2	3	4	5	6	7	8	9	10	11	12
4. Insurance (F). (Impress upon the student the need to seek assistance in this area in real-life situations.)														
a. Recognizes insurance terms and understands their meaning.													✓	✓
b. Knows what types of insurance are available through his/her job.													✓	✓
(1) Worker's compensation														
(2) Health														
(3) Life														
(4) Disability														
5. Applications (F). (Impress upon the student the need to seek assistance in this area in real-life situations.)													✓	✓
a. Recognizes terms on basic job applications and knows the meanings.									✓	✓	✓	✓	✓	✓
b. Relates the terms to the information requested.									✓	✓	✓	✓	✓	✓
(See supplement to The Student As An Employee)														

Program Level Objectives

Prep 6 Exit — Given a Stanford or Gates Test, the student will demonstrate his/her knowledge of the vocabulary and the appropriate answer by filling in the form on the front page without help with 75% accuracy.

Grade 6 Exit — Given a list of 4 times written numerically (12:00), including the hour and half hour, and 5 blank clock faces, the student will draw hands to indicate the given times with 75% accuracy.

Grade 8 Exit — Given a standardized test, the student will demonstrate his knowledge and understanding of the questions and vocabulary by filling out the form with 100% accuracy.

Grade 8 Exit — Given 10 clock faces showing times including half hour, quarter hour, and odd minutes (10:53) the student will write the correct time in numerical notation under each clock face with 75% accuracy.

Grade 12 Exit — Given 4 questionnaires of various kinds (e.g., teacher-made, in magazines, for form or school use), the student will respond with the necessary informatic using his own personal identifications cards, if needed, and return the question-naires to a box specifically labeled for it 3 out of 4 times.

CRITICAL SKILLS	P 1	P 2	1	2	3	4	5	6	7	8	9	10	11
6. Questionnaires. (Impress upon the student the need to seek assistance in real-life situations.)													
a. Recognizes a questionnaire as a form that requires written responses to questions.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
b. Is familiar with general vocabulary used in questionnaires.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
c. Knows that some questionnaires are important and some are not.								✓	✓	✓	✓	✓	✓
d. Refers to personal information card for answers to general questions and copies information correctly.												✓	✓
e. Knows what to do with completed questionnaire.												✓	✓
7. Gauges													
a. Knows how to tell time.													
(1) Ordinary clocks			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(2) Timers									✓	✓	✓	✓	✓
(3) Digital clocks									✓	✓	✓	✓	✓
(4) Alarm clocks used by the deaf											✓	✓	✓

Program Level Objectives

Grade 6 Exit — Given examples of 10 thermometers with various temperatures, the student will write the temperature for each in numerical notation with 75% accuracy.

Grade 8 Exit — Given a random list of 10 temperatures and 10 thermometers marked only with 32^{C} and 100^{O}, the student will locate and label the correct temperature on each in order of coolest to warmest with 75% accuracy.

Grade 12 Exit — Given the classified section of a newspaper, the student will locate the "Help Wanted" ads; select 5 ads; list the types of job, salary benefits, requirements, etc.; note information not given; and check ads for which he might qualify with 60% accuracy.

CRITICAL SKILLS	P 1	P 2	1	2	3	4	5	6	7	8	9	10	11	12
b. Knows the function and use of a time clock.													✓	✓
c. Knows how to interpret information from thermometers (weather and fever)						✓	✓	✓	✓	✓	✓	✓	✓	✓
d. Knows how to read and interpret information on dials and meters (business and industrial machines).													✓	✓
e. Knows how to read and interpret information on weighing scales.			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8. Finding a job. (Impress upon the student the need to seek help in this area in real-life situations.)														
a. Identifies the terms describing those jobs he could do.									✓	✓	✓	✓	✓	✓
b. Selects want ads from newspapers, bulletin boards, store windows which describe jobs he could do.														
(1) Finds the title and/or classification of the job offered.														
(2) Recognizes salary and benefits which may be described.														
(3) Recognizes conditions for qualifications listed (e.g., high school graduate, experience necessary, hours).														
(4) Follows and finds instructions for answering the ad.														

Program Level Objectives

Prep 2 Exit

Grade 3 Exit

Grade 6 Exit

Grade 8 Exit

Grade 12 Exit

CRITICAL SKILLS	P 1	P 2	1	2	3	4	5	6	7	8	9	10	11	12
(5) Is aware that all the pertinent information may not be included in the ad (hours, salary, etc.).											✓	✓	✓	✓
c. Recognizes the forms most often used in applying for a job and understands their special vocabulary well enough to fill them out correctly.											✓	✓	✓	✓
d. Knows what the terms Vocational Rehabilitation and Dept. of Human Resources mean to a job seeker and knows how to contact those agencies.													✓	✓
e. Answers simple written questions which may be asked by a prospective employer.											✓	✓	✓	✓
(1) Do you have experience?														
(2) Where did you work before?														
(3) Why did you quit your last job?														
(4) Do you have a car?														
f. Recognizes and understands the form of his paycheck and its accompanying statement of deductions well enough to endorse it correctly and to note the deductions.													✓	✓

Career Education Learning Activities

Grade P2 Skill Number ___ Career Education Goal ___

No academic skills are checked at this grade level.

Grade 3 Skill Number 6b Career Education Goal Basic Skills Self-Awareness Employability Skills (CCEM Concepts: Beginning Competency)

The student will follow these directions:

1. Print your first name.
2. Print your address.
3. Print the name of your school.

Grade 6 Skill Number 7a1 Career Education Goal Self-Awareness Decision Making (CCEM Concepts: Self-Awareness Decision Making)

Each student will record the exact time that s/he enters the classroom in the morning. This procedure will be followed for a week. Then the class will discuss how responsible each person was in arriving on time.

A time card will be borrowed from a work experience student in high school. The class will read and interpret what time that student arrived for work each day.

Grade 8 Skill Number 8b Career Education Goal Career Awareness and Exploration (CCEM Concepts: Beginning Competency Employability Skills)

Give each student a copy of the job want ads from newspapers. Each student will choose two jobs that s/he might do and will write the full title of the positions. This information will be shared and discussed with others in the class.

Grade 12 Skill Number 5c Career Education Goal Career Planning and Decision Makin (CCEM Concepts: Beginning Competency Employability Skills)

Each student will practice the completion of various job applications in preparation for taking the competency tests in proficiency standards for graduation.

National Project on Career Education

Appendix E
Analysis of Accomplishment

Infusion of career education concepts is not an emphasis on new courses, but requires, instead, examining learning experiences in the existing curricula. The following pages are offered as a guideline for evaluating what has been accomplished in the actual infusion process. In using the *Analysis of Accomplishment*, the reader should place a check by each of those items which have been accomplished.

To start the process of analyzing, examples of activities are included. These are provided only as a guide for use in writing those which fit your curriculum.

Analysis of Accomplishment*

Part I. In the curriculum itself

A. Identify the portion of the curriculum which assists in the development of proficiency in essential beginning competencies.

1. English

a. Use reading, writing, speaking, and listening skills unique to the discipline area as they apply to the world of employment.
   (1) Compose letters of application for employment.
   (2) Practice interviewing techniques.
   (3) Identify employment positions for the discipline area from want-ad section of newspapers.

b. Use beginning competency skills as they apply to the use of leisure time.
   (1) Write musical rhyme or rhythm for songs for a musical instrument.
   (2) Interview persons whose hobbies center around specific discipline areas (science: butterfly collection; athletics: baseball cards, etc.).
   (3) Deliver speeches about favorite leisure-time activities.

c. Use beginning competencies as preparation for life.
   (1) Read menus and place food orders correctly.
   (2) Read recent articles in health journals and write reactionary statements to new research and implications of that research.
   (3) Prepare speeches to deliver in history class on social implications of a recent federal legislative act.

2. Computation

a. Apply skills to various life experiences.
   (1) Checkbook maintenance.
   (2) Measuring in food preparation.

* Egbert, A. M. Effectiveness analysis of the National Project on Career Education inservice. Unpublished doctoral dissertation, Colorado State University, 1981. Adapted from Newcomer, L. B. The Rise Report: Report of the California Commission for Reform of Intermediate and Secondary Education, 1975.

(3) Measuring for occupational interests, such as making personal greeting cards or constructing items from wood.

b. Teach the ability to select correct mathematical procedure for solving the problem at hand, whether in the classroom or a real-life situation.
   (1) Identify the tools and methods necessary to correctly measure windows for purchasing or making curtains.
   (2) Interview workers who weigh items for sale (e.g., feed for stock) to determine the skills necessary for that employment field.
   (3) Determine the processes used in preparation of a bulletin board (measuring and mailing letters, etc.).

3. Physical conditioning and psychomotor coordination

   a. Establish health practices to serve throughout a lifetime.

   b. Provide for participation in appropriate activities to meet personalized physical-conditioning needs.

   c. Advocate the development of leisure-time activities.

4. American government and social institutions

   a. Apply themes, lessons, and trends in history to existing political situations.
      (1) Draw comparisons between Roman government and the Roman Empire's downfalls and certain trends in current government situations.
      (2) Describe the beginnings of the automobile manufacturing industry and the fiscal situation as it stands.
      (3) Trace the development of changes in governments, boundaries, and countries' names in the Middle East and relate the history of the countries to the U.S. involvement.

   b. Provide experiences which focus on one's role in government.
      (1) Visit a local or state legislator.
      (2) Attend a community hearing.
      (3) Attend a legislative session.

   c. Provide exercises which focus on one's rights and responsibilities.
      (1) Conduct a mock trial.
      (2) Discuss legal rights as they apply to arrest (use of interpreter, due process, etc.).
      (3) Attend a citizenship-installation ceremony.

d. Examine the nature of society and its economic, political, social, and cultural institutions.
   (1) Identify skills necessary for specific occupations in the transportation field and determine how transportation ties together all institutions listed above.
   (2) Identify the unique machinery used in clothing production, the beginning competency in use of the machines, and the institutions upon which the clothing industry impacts.
   (3) Analyze the problems faced when making a life-style-choice decision, especially the impact which economic and social institutions have on that decision.

e. Develop an understanding of the connection between school administration, student government, and administration and government which exists outside the school setting.
   (1) Draw a comparison chart of student body government and federal government.
   (2) Draw a comparison chart of local chapters of Jr. NAD, student body government, and local city or state government.
   (3) Invite a local legislator or city council member in to discuss their involvement in politics.

5. Scientific literacy

a. Apply concepts and processes to explain the physical world.
   (1) Describe data collection processes, tools, and equipment used in diagnosing illness and prescribing remedies.
   (2) Identify tools, materials, and skills necessary to build a solar energy model.
   (3) Assess processes, tools, and equipment needed for maintaining a farm.

b. Apply concepts and processes to technology and occupational titles.
   (1) Determine service relationships involved in providing health services.
   (2) Demonstrate mastery of tools needed for entry-level job of nurse's aide.
   (3) Determine occupational titles of persons involved in X-ray technology.

6. Health

a. Develop knowledge, lifelong attitudes, and practices leading to optimum health.
   (1) Describe and select appropriate clothing to wear for certain weather conditions.

(2) Demonstrate procedures for selecting appropriate medical assistance needed (e.g., which type of doctor, use of emergency services, etc.).
(3) Demonstrate skill in locating health clubs and recreational facilities.

b. Promote respect for personal health care.
(1) Demonstrate comprehension of written prescription directions and appropriate procedures.
(2) Describe proper techniques for a once-a-year health check and determine which doctors are appropriate for needs.
(3) Demonstrate skill in locating health facilities in phone book.

c. Understand biological and psychological processes of human development.
(1) Describe types of tools which can be used to measure biological development or illness (EEG, EKG, etc.).
(2) Match individual ability with biological development stage.
(3) Identify unique tools and devices used as measuring devices in the psychological process.

d. Create awareness of diseases and disease-control practices.
(1) Identify unique tools used in medical laboratory.
(2) Describe skills necessary for general disease control on a national level.
(3) Identify the progress made by the National Health Organization against epidemics by showing the reduction in numbers of persons killed.

e. Develop skill in selecting health products and services.
(1) In the prescription-drug department of a store, select the appropriate generic medication which satisfies determined need.
(2) See 6.a. (2)
(3) See 6.b. (1)

7. Aesthetic experiences

a. Promote appreciation of beauty, sensitize to environment, or enhance enjoyment of environment.
(1) Discuss art techniques used by the masters.
(2) Relate scientific growth of flowers to painting pictures.
(3) Critique modern dance routine for set design, smoothness of line, and type of movement.

b. Allow for participation in aesthetic experiences such as art, music, theater, or literature.

(1) By tryouts, determine if one's skills are appropriate for the position available in the theater production.
(2) Select an art project for expressing a science concept which is appropriate for one's skills.
(3) Determine musical skills and interest and enroll in an appropriate music appreciation or instruction class.

B. Identify the portion of the curriculum which assists in the development of self-awareness.

1. Develop and clarify social, political, moral, and cultural values of self and of others.

a. Teach skills required for critical analysis of differing opinions.
(1) Collect newspaper clippings and editorials which express opinions similar to one's own.
(2) Express opinion on preselected issue during a debate over issues.
(3) Write an editorial to a newspaper or magazine to clarify opinion on a social, political, moral, or cultural issue.

b. Sensitize to techniques, intent of propaganda, slanted materials, and fallacious thinking.
(1) Discuss appropriate behaviors and emotional adjustments in relation to values.
(2) Identify stereotyping materials which are written about handicaps.
(3) Relate the Nazi propaganda philosophy to the emotional responses evoked.

c. Relate values system to one's role in society and identify the relationship between the selected role and gained or expressed values.
(1) Describe personal emotions in commonly used terms and relate them to personal experiences.
(2) Compare own values to those required by selected occupational choice.
(3) Determine the extent to which the handicapping condition affects one's values.

d. Equip learner for positive human relationship with family and others.
(1) Compare one's personal health habits and relationship with others.
(2) Identify ways the individual can contribute to the home.
(3) Identify rights and responsibilities of self within a living situation.

e. Provide experiences for contact with people whose racial, ethnic, socioeconomic, or cultural backgrounds are different from one's own.
   (1) During a course in American history, conduct a panel discussion of how various cultural roles can present life-styles of the American Indian, the American black, American Hispanic surname individual, and other representatives of minority groups.
   (2) Interview a Vietnamese refugee, Indo-Chinese person, or others to determine changes the individual has undergone.
   (3) Compare the socioeconomic and cultural background of a person from a foreign country and a middle-class American.

2. Foster insight into relationship of self to ecological, social, and economic environments.

   a. Identify one's role in economic environment and implications of that role on ecological and/or social environments.
      (1) Understand one's own decorating interests and how to express those interests in the place of residence.
      (2) Compare similar economic incomes and differences in social, ecological environments, and where one's own personal interests are in relation to these.
      (3) Determine the extent to which the handicapping condition will influence job choice and, consequently, economic standing.

   b. Stress importance of one's value system in the selection of environments and occupations.
      (1) Identify community helper roles one might enjoy being involved in.
      (2) Determine level of satisfaction one would have in a career in the clothing industry.
      (3) Understand the job role of the supermarket worker and how it fits each individual.

   c. Determine one's occupational choices in light of environmental desires.
      (1) Describe the type of environment preferred, regardless of occupation and determine occupational choices available based on environmental desires.
      (2) Identify climate conditions in various geographic areas of the United States and identify those areas which reflect personal preference.
      (3) Describe geographic areas, including altitudes, sizes of cities, etc. and rank those areas in light of one's own preferences.

C. Identify the portion of the curriculum which assists in the development of economic awareness.

1. Foster understanding of social, economic, and ecological systems and the global society.

a. On the local level:
(1) Compare the relationship of illness and medical services to the cost of those services.
(2) Describe the pay differences for helping role as school employees based upon years served, level of employment, etc.
(3) Identify the various ways services are paid for (check, cash, credit card, charge, prolonged payment, etc.).

b. On the state level:
(1) Describe the economic impact of arson on insurance coverages of homes.
(2) Compare economic advantage and geographic location in the state.
(3) List the economic/employment base of the state.

c. On the federal level:
(1) Describe the economic impact of raising and lowering the prime interest rate.
(2) Compare the GNP of the U.S. to other nations.
(3) Compare standards of living and the social and ecological standards of various nations.

2. Understand processes used in the production of goods and services.

a. Teach how to discriminate among products and services as a consumer.
(1) Compare products made in U.S. to similar items that are foreign produced.
(2) Identify differences between necessary commodities and luxury items.
(3) Using an itemized cost listing from a hospital, distinguish between services rendered and products used.

b. Teach how to determine value of goods and services.
(1) Compare the cost of psychological care, group and individual therapy.
(2) Determine the availability of materials and the cost of building in geographical areas (supply and demand).
(3) Discuss how businesses price services and goods in relation to profits desired and costs incurred.

c. Develop functional skills needed for management of income, business matters, and consumer responsibilities.
   (1) In a class project, determine price of item to be made and sold so as to realize a profit.
   (2) Determine the costs of solar heating, due to geographic location, costs of location, and possible income-tax credit.
   (3) Determine the financial involvements of managing a larger farm and that of smaller farm units.

D. Identify the area of the curriculum which instructs in the process of decision making.

1. Identify the steps in the decision-making process so student can:

   a. Describe the problem clearly.
      (1) Identify alternative for snack foods based upon "healthy" vs. "junk" foods.
      (2) List tasks to be accomplished in the school setting.
      (3) Describe existing weather conditions.

   b. Develop alternative solutions, identifying consequences of each.
      (1) Draw up two or more floor plans, based upon site, size of home, number of rooms, and location of rooms within the home.
      (2) Match alternative emotions or moods to situations.
      (3) Identify desired occupations which require long-range planning and those which are short-range oriented.

   c. Select an appropriate solution based upon consequences.
      (1) Describe geographical and technical impacts upon occupational decisions.
      (2) Interview employees in a factory and determine what influenced them in their career choices.
      (3) List reasons for choices of actors and actresses for a school play.

2. Instruct in the process of individual understanding of abilities, weaknesses, interests, values, and personal qualities, relating those qualities to educational and personal decisions.

   a. Identify careers in science which hold potential depending upon one's abilities and weaknesses.

   b. Plan three alternatives for pursuit after graduation.

   c. Assess the career selection model based upon guidance and counseling, cooperative work experiences, other work experiences, and personal interest.

3. Provide opportunities for individuals to be involved in decisions affecting their education and future.

   a. Develop awareness of responsibilities and consequences of those decisions.
      (1) Identify differences between needs, wants, and economic income limitations which are encountered as one begins to enter the labor market.
      (2) Identify leadership role responsibilities of presidents of organizations or clubs.
      (3) Determine the work experience or career exploration experience one wants to be a part of.

   b. Provide experiences in coping with responsibilities.
      (1) Role play expectations, roles of various members in an operating room.
      (2) Take part in a class money-making project.
      (3) Determine which of three alternatives will be selected for a social studies project.

E. Identify the portion of curriculum which allows for continuing opportunities for developing career awareness and employability skills.

   1. Develop an awareness of occupations, clusters of related occupations, and a changing employment market.

      a. Complete career ladder information sheets.

      b. Classify occupational titles into similar groupings.

      c. Compare job titles of today in the field of construction with titles used 12-15 years ago.

   2. Emphasize career planning and relationship of employment opportunities to skills possessed.

      a. Provide career-planning, job-hunting, and job-seeking skills.
         (1) Interview for a job in a mock interview situation.
         (2) Write appropriate resume in English class.
         (3) Identify employment agencies in the telephone book.

      b. Foster knowledge of world of work and the basic academic and vocational skills required for adaptability in that world.
         (1) Interview employees in selected occupational fields to determine the skills they possess in relation to their job.
         (2) Use the want ads to locate job openings and to describe qualifications needed.

(3) A guest lecturer may describe obstacles faced in the employment field due to "handicapping condition."

3. Develop entry-level job skills.

a. Enroll in vocational class.

b. Begin a work/study progam.

c. Enroll in academic course designed for college-entry skill development.

F. Identify the portion of the curriculum which assists in the development of attitudes and appreciation.

1. Formulate appropriate attitudes about personal and social significance of work, both in the classroom and in the world of work.

a. Develop good work habits.
(1) Describe work habits of community helpers.
(2) Show appropriate emotion and mood control, especially in relation to specific situations.
(3) Identify appropriate work habits necessary to complete homework on time.

b. Foster the desire to work.
(1) Describe reasons why early settlers to America considered home construction important.
(2) Explain the role of the desire for job improvement in technological development.
(3) Compare various presidential leaders' previous work roles and explain possible reasons for their climb to the presidential seat.

c. Foster personally meaningful work habits.
(1) Compare one's current work habits with those of someone employed in an occupation of interest.
(2) Outline the week by time used on projects.
(3) Develop a checklist of assignments, due dates, and outcome.

2. Stimulate interest of learners to develop attitudes and appreciation for careers.

a. Role play career roles and duties.

b. List contributions which various employees and occupations make to the society we live in (e.g., garbage collectors, postal workers, police, gas station attendants).

c. Compare training and educational opportunities in U.S. for occupations with that of two foreign countries, identifying advantages and disadvantages.

G. Identify the portion of the curriculum which assists in the development of <u>educational awareness</u>.

1. Acquaint the learner with continuing-education options and means available to them.

a. Write to educational programs for their pamphlets and brochures.

b. Use the section in the library which has catalogues and information relating to postsecondary education and training.

c. Interview an employee or a college student to determine what they needed in terms of additional education and training.

2. Provide knowledge, experiences, and skills necessary to begin implementation of career objectives and routes for career advancement.

a. Write letters requesting application forms.

b. Set up and conduct an interview for a job (part-time or summer) in one's area of interest.

c. Select an occupation to observe the career ladder steps and positions of possible advancements.

Part II. In surveying commercial and teacher-made materials which are currently being used in your classroom (whether textbooks, visuals, media, or other printed matter), the following items may serve as a guide to determine if the material does, in fact, infuse career education concepts. Check all those which apply:

____ 1. Is reference made to how the information relates to the world of work?

____ 2. Are roles of responsibility and employment depicted in the material?

____ 3. Are experiences planned for units so as to apply learned information to hands-on encounters?

____ 4. Are handicapped persons, minorities, and workers of both sexes depicted in the materials in a nonstereotyped manner?

____ 5. Are occupations portrayed for every topic discussed?

____ 6. Do those occupations represent a broad spectrum of options, i.e., professional, skilled, and unskilled?

____ 7. Do illustrations show handicapped persons at work?

____ 8. Do illustrations represent various age groups at work?

____ 9. Is the boss a professional-level worker or are a variety of bosses demonstrated?

____ 10. Are men and women portrayed as having handicap-linked personality traits which influence their working abilities (e.g., jolly fat person as a baker)?

____ 11. Are handicapped people portrayed in family roles?

____ 12. Is equal assignment of tasks given to members of the family, regardless of handicapping conditions and sex?

Part III. In assessing the infusion of career education concepts into the general curriculum, observe the following ideas in regard to the basic objectives of that specific area. Check those which apply:

____ 1. Do subject-area objectives deal with knowledge/facts, concepts, generalizations, or principles without applications to the world out of school?

____ 2. Are the social, academic, or psychomotor skills taught related to the world of work?

____ 3. What modes of thought are stressed: applying reason to judgment and action or thinking situations through?

____ 4. Are the primary emphases cognitive, affective, or behavioral?

____ 5. Is the goal comprehensive, one general goal with multiple goals or specifics?

____ 6. Is the goal specific and generally expressed in behavioral statements?

____ 7. Is the objective based upon hierarchical, developmental, or sequential relationships, and if so, how are each of these related to the life situations which occur outside the classroom?

____ 8. Are objectives drawn from a particular approach to learning: from demands in the subject area, from student needs, or from situational needs?

____ 9. When assessing one's approach to teaching that subject area, one major question which might be asked of the individual is, "What do I want the student to know about this subject, why is it important, and how have I or will I use it (the information which you are relating) in my own life?"

NPCE

National Project on Career Education

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